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THE EDITOR'S PAGE

Research Communication: Goals and Processes

In September 1987 the *Report of the Task Force on Technology and Research Communication*, established by the Social Sciences and Humanities Research Council three years earlier, was released. The report affirms four interrelated goals for the process of scholarly research communication: availability, authentication, accessibility, and preservation. *Availability* provides for the content of research to be in the public realm so it may be seen and used by others. *Authentication* refers to the trustworthiness of the research and the means employed to ensure quality. *Accessibility* means making research information easy to obtain at an affordable price. *Preservation* aims at ensuring the survival of accumulated information and knowledge.

The task force views the traditional system of research communication as being under severe pressure because of the growth in research output, the increasing level of specialization in research output, and the rising costs of research output coupled with increasing financial constraints imposed on purchases by users and libraries. The traditional system is also perceived as being influenced by *complementary* applications of technology intended to make it more efficient (e.g., word processing, computerized data bases) and by *transformative* applications that fundamentally change the process (e.g., storage disks; conferencing via audio, video, or computer networks).

While the adoption of new technology has alleviated some of the pressures acting on the process of research communication, the task force concludes that none of the four goals is being completely met at the present time. There is no disputing the validity of this conclusion in the field of education. Indeed a much harsher judgment could be applied to our achievement of the goals of availability and accessibility. Much of the research in education is undertaken by those seeking graduate degrees. Little of it is presented for public scrutiny, particularly if the research is in the qualitative or naturalistic mode which is not easily interpreted in the succinct fashion demanded by the traditional system of research communication. Although the dogged researcher can gain access to thesis research and the "grey literature" (documents produced outside the normal channels of publication and distribution), those engaged in professional practice remain largely unaware of their existence. Moreover, the increasing specialization in research tends to make the products that practitioners do encounter appear unrelated to the realities of schooling.

That a vast number of potential users of research in many occupations are being bypassed or forgotten by existing communications processes was virtually disregarded by the task force. This oversight is not surprising considering its sponsor and composition. But those who do research in education dare not ignore this phenomenon. How can our research be a potent source of enlightenment or change if most of those who work in the educational enterprise never learn about it?

W.H.W.

C. HARRY PAYNE

Northern Territory Education Department (Australia)

Parents and Control of Elementary School Principal Work Behavior

This article reports on an exploratory and descriptive study which investigated the influence exerted by parents, normally the most important environmental control, on elementary schools and their principals in a large Catholic school district in Alberta. The perceptions of trustees, senior administrators, principals, and teachers were gathered through a questionnaire and semistructured interviews and available documentation examined. The principalship's main constituencies are superordinates, staff, and parents/students, and a key function of the principalship is to establish an appropriate balance among influences from these three sources. Since the principal can determine what happens in a school, the tripartite relationship of principal, superordinates, and parents was of particular interest. Parents exercise a much greater influence over principals' work behavior, and consequently schools, than is generally recognized. As schools are given and assume greater autonomy, parents can function as a control over principal behavior with local accountability replacing hierarchical control. This development may still serve the interests of the school system if it is appropriately managed.

The relationship between parents and principals has not been thoroughly explored (Morris, Crowson, Hurwitz, & Porter-Gehrie, 1984). Nor have the attitudes of principals' superordinates toward this relationship been investigated in any depth. Yet some studies have indicated that parents are an important determinant of principal work behavior and that because their influence is fostered by the school district it may constitute, in effect, part of the school district's principal control system. The study reported here (Payne, 1987) aimed to determine whether parental influence is a significant control over principal behavior and whether it is part of the district's principal control system. Consequently, the focus of interest was some aspects of the tripartite relationship among principals, parents, and superordinates.

In view of the established importance of principals for affecting what happens in schools (Rossmiller, 1986a, 1986b), it is desirable to know as much as possible about the determinants of principal work behavior. A recurring theme in the literature is principal leadership and the key role of the principal in ensuring the existence of those characteristics in a school which have been consistently associated with

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effective schooling. Among these characteristics, three which seem pertinent to the tripartite relationships are: school site autonomy; involved, informed, and supportive parents; and strong school system support (Purkey & Smith, 1983). Interestingly, these bear considerable resemblance to the autonomy and entrepreneurship, close customer relations, and simultaneous loose-tight organizational properties with control through key values, which Peters and Waterman (1984) identified as characteristic of excellent companies.

Parental influence rather than the more common *community* was selected for study because some research (Grassie, 1979a, 1979b; Morris et al., 1981) has revealed that parents are by far the most important environmental constituency for principals and are surpassed in their importance for, and influence on, principals only by superordinates and school staff. Grassie's study (1979a) of the influence principals attributed to many nonschool sources demonstrated clearly that superordinates and parents were the major influences on principal work behavior.

The notion of parental influence as part of the district's principal control system comes from Peterson's work (1983, 1984). He reintroduced in the literature of educational administration the historically valuable but currently little used concept of control to explain his findings that districts use a web of interdependent mechanisms in order to constrain and channel principal behavior. The web of multiple mechanisms is necessary in order (a) to adapt the pattern to each principal's unique circumstances, (b) to allow the principal to resolve often dilemmatic expectations, and (c) to facilitate establishment of that balance of influences on the school most appropriate to its circumstances. One of the mechanisms Peterson identified and labeled an environmental control was the requirement by the district that principals have community support. He reasoned that this was a district control because the district made clear its expectations and did various things which, directly or indirectly, ensured that principals were sensitive to community influence. Duke and Stiggins (1985) have elaborated on this notion with regard to principal supervision by pointing out that those who have found little supervision of principals may have failed to recognize the influence of "supervisory visits by nonhierarchical influentials" responsible for "extraorganizational" monitoring of principal behavior.

These indications in the literature suggested first, that parental influence on principals may be greater than is generally recognized. Practice and the reality of the principal's situation may have developed characteristics which are not adequately reflected in formal school system policies or in the literature of schools administration. Second, there is the suggestion that school systems' promotion of the influence of parents helps to ensure that principals and schools pursue system goals irrespective of whether there is a deliberate strategy to this effect. This latter point assumes increased significance in light of the consistent trend to shift decision making power to the school level (Ewanyshyn, 1986) and the growing evidence for both the political and educational desirability of doing so. Ensuring accountability to parents at the local level may compensate for the school system's difficulties in ensuring direct school accountability to the district. Loose coupling theory (Meyer & Rowan, 1977; Weick, 1976) and findings which illustrate the scope for discretionary decision making in the principalship (Brieschke, 1985; Crowson & Porter-Gehrie, 1980; Morris, et al., 1981) emphasize the ineffectualness of direct principal control and the need for alternative means of control if school systems are to discharge their own responsibilities for coordination and strategic direction of schools.

An extensive review of the literature and some preliminary interviews indicated that exploratory and descriptive research was most appropriate because the tripartite

relationships have been the subject of little empirical research. In addition, the existence of a voluminous literature with some relation to the problem, the absence of any widely accepted theory, the complexity of the factors involved, and growing acknowledgment of the inadequacies of any single perspective on organizations all indicated that this exploratory research should make use of any and all available conceptual lenses.

Major questions or aspects that seemed pertinent to the problem involved (a) the significance of parental influence for the principal, (b) the significance of the principal as a medium for parental influence on the school, (c) the encouragement and facilitation of parental influence on the principal by the school system and (d) the means through which parents exercised influence.

Data Collection

The research involved an in-depth examination of some aspects of the tripartite relationships in one reasonably large, publicly funded Catholic school system in a provincial capital. As there is some evidence that the relationships may vary with levels of schooling (Firestone & Herriott, 1982a, 1982b), and as most related research has been conducted with elementary schools, this exploratory study was restricted to elementary schools. As people behave according to how they perceive reality, the data for the study were mainly perceptual.

The organizational participants best placed to observe the influence of parents on principals and schools are principals themselves, trustees, senior administrators, and teachers. All elementary principals, trustees, and senior administrators in the district were invited to participate in the study. A purposive sample of teachers was obtained by asking elementary principals to nominate three teachers from their staff who were experienced, likely to respond, and whom they thought would have some views on the problem.

Data were gathered through a questionnaire and semistructured interviews with some supplementation from document analysis. Multiple methods and multiple sources allowed for triangulation. The questionnaire, which was extensively pilot tested and critiqued and progressively refined, contained 30 items common to all respondents, a short section for each category of respondent, and an invitation to make further written comment. The common items asked respondents to rate on a four-point scale (a) the importance of parental influence on principals, teacher, and superordinates, (b) the importance of parental influence in various aspects of school operations, and (c) the importance attached by principals to some matters the literature suggested might be related to the problem. The questionnaire section for each particular group of respondents asked for a few personal details and for responses concerning aspects of parental influence peculiar to the group.

The semistructured interview schedule was constructed to supplement the questionnaire by exploring the bases for questionnaire responses and also raised matters not amenable to the questionnaire technique. It allowed respondents to introduce information they considered relevant. The schedule was pilot tested through preliminary interviews with experienced and knowledgeable educationists in the province and through critical comment from faculty and postgraduate students.

Data were collected from 42 of the 46 elementary schools early in the 1986/87 school year. As much personal contact as possible was made with respondents with, for example, initial contact by personally addressed letter and follow-up phone call. The overall return rate for questionnaires was nearly 90% with six usable returns from trustees, nine from senior administrators, 42 from principals, and 104 from

teachers. Detailed examination detected no bias in sources of returns. Seven trustees, nine senior administrators, 13 principals, and nine teachers were interviewed for periods averaging one and a half hours. A combination of random and purposive selection ensured principal and teacher interviewees tended to be representative of elementary schools and their staff in the district. Interviewees had the opportunity to correct and amend their interview records.

Data Analysis

Analysis of the questionnaire data was primarily through visual inspection of frequency counts and percentage frequencies. Interview responses were categorized according to specific questions asked and through themes which emerged from the data itself. Some limited content analysis of district documents established what was emphasized by the district in its policies and published materials. The main use of documents was to ascertain the official position for comparison with the perceived position.

Two analytic frameworks were developed from preliminary investigations, suggestions in the literature, and indications in the data in order to organize the full analysis of the data. They illustrate the complexity of the circumstances in which parents serve as a control over principal behavior. Figure 1 brings together, in general terms, those aspects of the tripartite relationship which proved to be of most interest in the study.

The figure is a simplification of a very complex world and highlights those aspects of most importance for the study. The principal (and school) are represented in the central box and surrounded by a larger box representing an important aspect of the environment which partly shapes, and hence controls, principal behavior. There are major omissions in this depiction. For example, there is reciprocal interaction in which principals may themselves shape, at least to some extent, the nature of the school's environment, including parental or superordinate influence. Similarly, parents may at times be part of the school, rather than its environment; or superordinates may be at once part of the same organization as the school or viewed as an environmental influence on the school.

Parental influence is only one aspect of the many, often interacting and interdependent environments that influence principal behavior, and this is illustrated by the all-encompassing box of nested environmental layers drawing attention to, for example, the provincial and societal contexts.

In the study the most pertinent aspects of parental influence on school that emerged from the data were its magnitude, growth, and characteristics. The existence, significance, and magnitude of parental influence are indicated by its perceived effects on principal behavior and school activities. The growth of parental influence in recent years could help explain the lack of recognition of its significance in the literature. In looking at characteristics or the nature of parental influence, the researcher was concerned with the ways in which the influence operates, such as whether it affects some areas of school operations more than others, or whether it serves to define a domain in which schools and principals exercise discretion, rather than affecting specific decisions. A possibly fruitful approach in understanding parental influence lies in examination of matters in which differences occur between schools and parents.

The box representing the school has a number of features. At the top is principal behavior because evidence for parental influence can be derived from that behavior and its importance established if the principal is the main conduit for influence on the

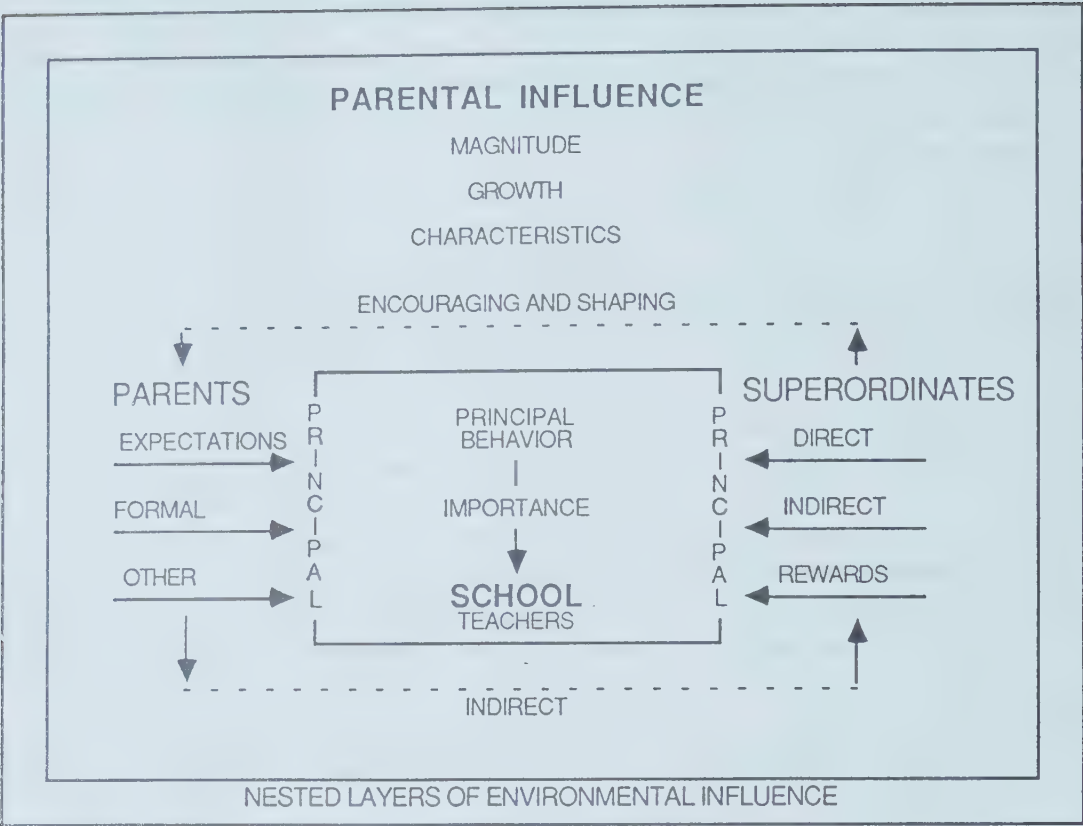


Figure 1: Analytical Framework for Parental Influence

school. Manifestations in principal behavior of parental influence are found in principals' propensity to demonstrate they have parent support, their responsiveness and sensitivity to parents, the importance they attach to resolving differences with parents, their handling of complaints, the extent to which they are constrained by parents, and their activities in buffering teachers and superintendents against parents. The significance for the school of parental influence on the principal depends on the principal's importance for the school—whether principal behavior affects the important activities of the school. An important associated consideration is the discretion or autonomy the principal has since this determines the principal's freedom to respond to, to influence, and to make changes in the school. Teachers are specifically identified since their work constitutes most of the core activities of the school. The significance of parental influence can be assessed by its effects on teachers, whether exerted directly, or indirectly through the principal. The influence may be manifested in teacher responsiveness to parents or demonstrated by parent involvement in selection, evaluation, transfer, and disciplining of teachers. A major omission, for simplification, is any reference to students. One feature of the school box is that the sides facing both parents and superordinates are made by the word "principal" in order to emphasize that influence on the school from both sources is largely mediated by the principal who may determine the reality of these influences for the school. The principal is positioned in this key, middle role, not only between the school (teachers) and the two sources of influence, but also between parents and superordinates.

The depiction of parents illustrates their influence on the principal and how it is exercised. If parents influence principals and schools, their expectations are important for principals and teachers, particularly if principals feel it necessary to have parents' support. The influence may be exerted formally through mechanisms designed for the purpose, such as advisory, consultative or governing committees, or meetings. There are many other direct and indirect ways in which influence is conveyed. Direct contact, such as in complaining, is one, but also, as the data revealed, indirect means such as informal "chats" are important, as is the presence in the school of parents engaged in various activities. The dotted line from parents to superordinates indicates both that parents may influence the principal and school through superordinates and also that they may enhance the influence they have on schools because of the influence they have with superordinates on matters of importance to principals. Examples of parents influencing through superordinates are when they take complaints to central office or trustees, make submissions to the board, petition to force action about an incompetent teacher, vote for trustees who will pursue particular policies, and use their organizations to pressure the district about policy. Examples of their influence being enhanced may be found in principals' believing that information from parents is used by superintendents in evaluating principals and in the allocation of the rewards available in the system.

Particular matters concerning parents emerged as significant from the data. As expected, some parents were found to be more influential than others. While all parents may have the potential to be influential, particularly if the school exceeds the bounds of the acceptable, only a proportion of parents are active in exerting influence under normal circumstances. More influential parents tend to have certain characteristics. Two characteristics, in particular, merited closer examination—socioeconomic status and membership of special groups such as those supporting the teaching of a particular language. Consideration of the perceived efficacy of policies promoting parental influence involved examination of parent committees associated with schools and of the implementation of provincial policies promoting parent involvement and participation in early childhood education and community schools.

Figure 1 shows superordinates (defined as anyone ranking above principals in the school system and including trustees) acting both directly and indirectly to sensitize principals to parental influence. A particularly significant example of how this occurs can be seen in the reward system of the school district. Direct means of encouraging responsiveness to parents included explicit policies and exhortation. An example of indirect promotion of parental influence is the attention given by superordinates to parental complaints—the seriousness and urgency with which they are handled conveys a message to the principal, as does referral to the principal of parents with problems. The reward system, which is generally structured by superordinates, can facilitate parental influence if benefits depend on demonstrating the capacity to work with parents or if principals and teachers believe that parents have a role in determining the benefits they receive. Parents may influence the selection, evaluation, promotion, and transfer of principals and teachers, the evaluation a school receives, or the future of a principal who loses their support. Superordinates may also encourage parents to exert influence. They may urge them to become involved, publicize their right to participate, build expectations for participation and establish mechanisms through which parents may participate. Less directly, through encouragement of a parent presence in the school in a variety of capacities such as aides or assistants, they create opportunities for parents to influence. Superordinates may also shape the nature and directions of the influence parents exert on schools by building parent expectations of

the school through promotion of notions of what a good school should be, giving publicity to notable achievements which might be emulated, and making parents aware of district policies and goals.

Figure 2 shows in more detail the three aspects of superordinates' influence on the parent-principal relationship. Superordinates influence the principal to be responsive to parents through the attitudes they convey and through the expectations they make clear. They promote parental influence efforts by raising parent expectations of being able to influence, and by encouraging and providing opportunities for parents to influence. They endeavor to ensure parental influence by their own responsiveness and accessibility to parents, by the manner in which they handle parent complaints, and by ensuring that the rewards available to principals are, in part at least, determined by the principal's parent relations. This figure illustrates the reasons for describing parental influence as a principal behavior control mechanism employed by the school system regardless of whether superordinates explicitly recognize it as such. As a depiction of actual circumstances it does not include related expectations superordinates have that principals will manage parents, controlling and channeling parental influence in the interests of the school and district.

Findings

With regard to the central problem of the study, there was no doubt that organizational participants in the district perceive that parents have a very strong influence on principal behavior and school activities and that this influence is, in effect, a control mechanism for the school district. Using the analytic frameworks to organize the analysis and synthesis, 54 propositions were derived as findings from organizational participants' perceptions and the documents. These propositions, pertinent to the research problem, formed the bases for the following conclusions about parental influence and its function as a principal behavior control mechanism in the district. The major conclusion appears in italics at the beginning of the following sections and is followed by findings which support or elaborate it.

Parents are an environmental control. They strongly influence principal work behavior. Differences between parents and principals are few and when they occur are afforded great importance by principals. Principals are anxious to demonstrate they have parental support, are very responsive to parents, sensitive to their concerns, and try to keep parents satisfied. The influence of parents on principals and schools has increased markedly and probably will continue to do so, particularly as principal responsiveness is encouraged by the district. However, principals also have to accommodate other influences, such as that from superordinates and, in effect, achieve a balance among major constituencies.

The ways in which parents control principal behavior can be conceptualized in terms of a continuum. At one end is a generally unconscious setting and monitoring of the boundaries or thresholds of a zone of discretion or tolerance established for the school. At the other, interventions may concern very specific matters. The former has been recognized in the literature because of easily identifiable cases of parent opposition being aroused when thresholds are crossed. This study highlighted the growing interventionist disposition of parents and the growing acceptance of their right to advise, at a general policy level at least, on any aspect of the school. There is a trend toward their participation in decision making on an increasing range of school matters. However, while they do have influence on specific core teaching and personnel matters, such as staffing arrangements, their right to do so is far from being widely accepted or acknowledged.

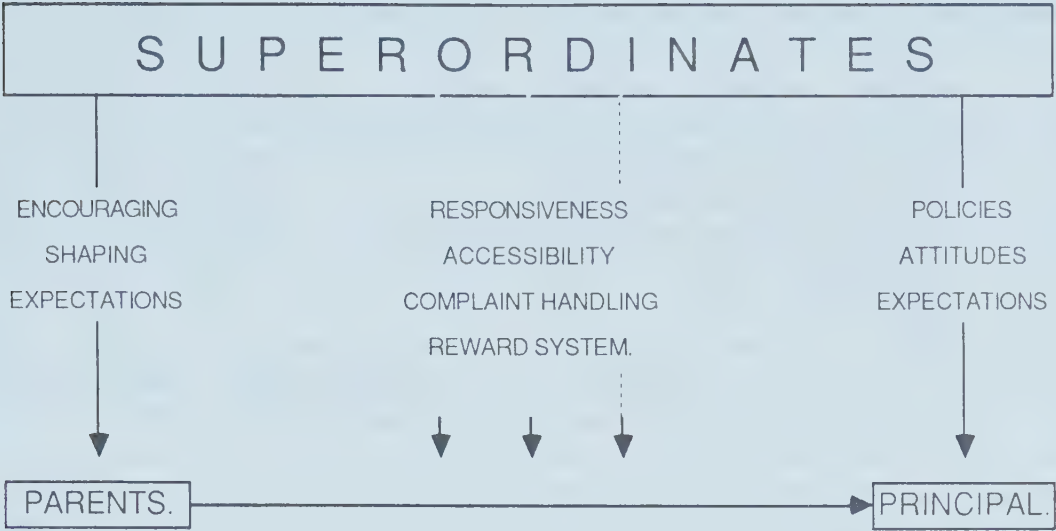


Figure 2: Superordinates and Parental Influence on Principals

How parents influence the school and what they influence are largely the result of their interaction with the principal. The principal can function not only as gatekeeper, allowing influence into the school and channeling it to appropriate activities, but in a more proactive fashion to bring parents to accept and support broadened school discretion and particular initiatives. The principal also has to ensure that parent satisfaction with the school is kept in balance with the satisfaction of other constituents, particularly teachers and superordinates.

The effects of parental influence can be seen in principal behavior and in various aspects of school operations. Principal behavior manifests the influence of parents in the attention principals give to demonstrating they have parent support, avoiding conflict, being responsive, resolving disagreements and keeping parents satisfied. That principals feel under some pressure to be sensitive to parent concerns is illustrated by their efforts to forestall superordinates' involvement in parent problems. Principals also represent parents and ensure staff and superordinates are responsive to their influence. At the same time they endeavor to limit and shape the parental influence to what is acceptable to these groups, particularly in those matters where parents' right to influence is more likely to be disputed.

Teachers are very conscious of parental expectations and of parents' role in school evaluation. Teacher selection and appraisal, particularly when teachers are incompetent or misbehave, are affected by parental influence. Parents believe the principal is the key to what happens in schools and generally direct their influence toward the principal. Teachers and the school are in turn influenced because principals discharge the responsibility they have for the whole school through both formal and informal powers of their office, their skills and the discretion both conferred on and inherent in their position.

Principal discretion is circumscribed by various controls, and some of the more powerful controls may not be the most obvious. Parental influence can be seen in direct pressures on the principal, but less obvious, for example, are the measures the principal takes to monitor the thresholds of acceptability from within the school so

that boundaries are not transgressed and opposition aroused.

Principals, being crucially positioned at the interface of potentially competing constituencies, have to establish a balance among influences. Teachers want to be free to pursue their work with children as professionals and expect the principal to buffer their school's work against parent interference. Superordinates make clear that parents are the principal's responsibility and also their expectation that the principal will both satisfy parents by accommodating their influence and also constrain their influence to approved channels and purposes. Principals carry the major responsibility for ensuring positive district relations with parents and engendering parent support for district objectives and goals.

While being responsive to parents, principals, in order to achieve the balance of influences most beneficial for the school, must also manage parents. Managing parents essentially involves use of communication and leadership skills in order to educate them about the desirability of the school's work. While fostering the power of parents by assisting them to organize, teaching the skills of influence, and removing obstacles to their influence efforts, the principal must also channel their interests. In reconciling leadership of parents with professional objectives, principals may tread a narrow line between participation and manipulation, between accommodation to parent wishes and molding parental influence to the principal's own purposes.

Parental influence is part of the school district's principal control system. Superordinates ensure principal behavior is influenced by parents and this constitutes a major constraint on principal discretion. Principals know they are expected to have parent support, need to keep parents satisfied, and have to be sensitive to parent preferences. The discretion principals are allowed by superordinates is needed in order to achieve a balance of parental influence with other influences in the particular school's circumstances. Superordinates have goals to pursue which are, at least in part, a reflection of their suprasystem's goals (e.g., the province and society) and they utilize parental influence on principals to achieve them. Superordinates' characteristic efforts to avoid conflict can accentuate the influence of parents.

The district reward system promotes principal responsiveness to parents because evaluation of schools, and principal promotion, assessment, and transfer are partially determined by evidence of harmonious parent relationships or absence of conflict, and principals and teachers believe that information from parents plays a significant part in these matters. However, this pressure for responsiveness is tempered by the district's expectation that principals will also manage parents in the interests of the school system.

The school district encourages parents to exert influence on principals by policies and publicity which build parent expectations that they should be able to participate and become involved and the district exhorts them to do so. At the same time the district establishes principal receptivity to parental influence by making clear that principals should have parent support and should satisfy parent concerns in a manner acceptable to the district. Because most central office superordinates' encounters with parents concern their complaints, and because superordinates often have to deal with principal-instigated parent pressure, they may underestimate the influence parents have on principals.

Superordinates tend to allocate responsibility for parents to principals, and professional superordinates do not see their own role as having a significant parent relations component. They can generally rely on parents' having conservative attitudes. But the corollary of district control of principals through parents should be an accompanying effort to mold the influence that parents do exert so that it furthers district

goal attainment. Limited efforts to build parent expectations of what the schools should be are seen in the public lauding of individual school achievements, forums, and information meetings, publicizing of aims and objectives, and written publicity materials.

Principals and teachers try to ensure schools reflect parent preferences partly because they recognize that parents attach great importance to their expectations of schools. While all parents may play a part in establishing and monitoring the zone of tolerance within which schools have discretion, some parents are more active and successful in influencing principals and schools more directly. These parents are generally articulate, better educated, more affluent, and knowledgeable about organizing and the politics of influence. The most successful influence efforts are often those of parents who are committed intellectually, emotionally, and materially to groups pursuing particular objectives such as bilingualism or preservation of ethnic identity and culture.

Parents can influence schools in many ways. Parental influence can be conceptualized in terms of a continuum from a role in establishing and monitoring the space for discretion allowed schools, to specific attempts to influence particular operational matters. There is a trend toward allowing parents an advisory role at the general policy level in *all* school matters and toward specifying an increasing range of matters in which they can participate in decision making. The growing openness of schools and increasing presence of parents on site raises parents' potential to influence because they become better informed and have more opportunities. Formally constituted mechanisms for parental influence, such as advisory committees or councils, are an important means of accommodating parent preferences and channeling influence, particularly where they are encouraged by the principal. Parents affect the career prospects of principals and teachers because they can and do intervene in personnel matters and are seen to be influential in the distribution of rewards.

The principal is the key to parental influence on schools. Parents want to exercise influence through direct contact with the principal of their school. Principals have most contact with parents and are the key to parental influence because of (a) their positioning, (b) parents' perception of their power, (c) their actual power to determine the nature and success of influence efforts directed at the school, (d) their need for parent support, and (e) their role in monitoring school activities to ensure acceptability to parents. It is the principal who has to achieve the balance of influence among the school's major constituencies.

Discussion

A major finding of the study was that trustees, senior administrators, principals, and teachers attribute to parents generally very considerable influence over principals' behavior and school activities, although there is considerable variation in parent activity among schools. The nature of this research calls for caution in generalization, but it seems significant that there were virtually no indications in the data that the situation with regard to parental influence is peculiar to the school system studied. The absence of parent perceptions from the data is the main weakness of the study, but the strength of the influence organizational participants attributed to parents suggests its reality for them.

Parental influence, and the principal's role in relation to it, does not receive much attention in the current literature despite the attention being given to principal leadership as a result of various research strands pointing to the crucial importance of the principal for effective schooling. This accords with the lack of appreciation of the

realities of the principal's work and the shortcomings of research which have been well documented (Allison, 1983; Bridges, 1982; Dill, 1958; Greenfield, 1982; Lortie, 1975; March, 1978; Moore, 1975; Morris et al., 1981, 1982; Murphy, 1986; Tyler, 1983).

It seems that principal and school sensitivity to parental influence may have increased through an incremental process (Boyd, 1978; Lindblom, 1968; March, 1981) which has outstripped recognition either in formal policy or among all except a few students of educational administration. As March wrote, people have beliefs about the environment and their actions in their conventional routine work activities are guided by these beliefs: "Actions taken as a result of beliefs about the environment do, in fact, construct the environment" and, "the discovery of new intentions is a common consequence of intentional behavior" (1981). This study emphasizes the importance of the influence that parents have on principals. Society has changed and the practice of educational administration has changed along with changing values and beliefs in society. This is not surprising in view of education's close association with social beliefs and society's values. Corroboration is in Schwartz's finding (1981) that societal changes have meant that the principal's role has become much more involved with boundary management.

Making of actual policy in implementation, as opposed to the ostensible policy found in formal statements, is well documented in the evidence supporting Lipsky's (1980) theory of street level bureaucracy and studies of the implementation of educational innovations (e.g., Berman & McLaughlin, 1976). The process of creating policy by adapting and manipulating formal policy to meet exigencies involved in getting the job done has been found to be characteristic of principal behavior, particularly of more effective principals (Morris, et al., 1984; Brieschke, 1985). Similarly, Stringham's study (1974) of the making of a provincial education act encountered a significant body of policy which is only recognized when practice is examined because the policy "has arisen through tacit acceptance of practice and is implicit, latent, and unwritten." Both Mann (1976) and Moore (1975) found, in studying the effects on principal behavior of changes toward decentralization in school governance, that they could not conclude that the changes had produced the behavioral effects because it was possible the changes in formal arrangements were simply reflecting the *de facto* situation in governance that had already developed. This accords with Wirt and Kirst's (1982) observation that about the mid-1960s in the United States parent groups began to become something more than the "extension of the school principal's mimeograph machine" that Mann later maintained they were (1975).

If parents are as influential over principal behavior and schools as this study suggests, then academic conceptualizations of school administration and its practice should recognize their influence. The debate about parent participation in school governance is cast in a quite different light when it is recognized that organizational participants already attribute considerable power to parents and generally accept the legitimacy of this role for parents. By building on a realistic assessment of what already exists, proposals for parent participation in governance should win acceptance more readily. Grassie (1979a) made this point following his findings in Australia. Legislatively decreed participation of parents in school governance, such as the recent changes in England and Wales (Edmonds, 1987) and in Victoria, Australia (Chapman & Boyd, 1985) might be seen as responses to what exists rather than a top-down imposition. In Canada the other provinces might move more quickly to emulate the lead given by Quebec, and in the United States acceptance of the parents' role might spread more quickly than it has to date. In view of the importance of parent involvement and participation for effective schooling, such moves should be treated as urgent.

The conclusions of this study add weight to the argument that the principal's role has not been adequately described in the literature and that principal preparation and improvement programs may be missing their mark to some extent. As Morris et al. (1984) pointed out, the important constituencies or influences for the principalship are superordinates in the school system, teachers, and parents. Grassie (1979a) identified parents as by far the most important environmental influence. A valid description of principals' work should devote major attention to interaction with parents and to the responsibility of the principal for establishing a balance among the internal teacher constituency, the superordinate school system constituency, and the major client group. The idea that achievement of balance is a major aspect of principals' work is not new since over 40 years ago Mort (Griffith, 1985), in the first major treatise on administrative theory in schools administration, stressed the need for the principal to exercise balanced judgment in order to resolve the contradictions in the list of principles he enunciated for good administration.

With regard to parents, principals have to achieve a balance which allows parents sufficient influence to keep them satisfied but not so much as to cause dissatisfaction among staff and superordinates because their own influence is correspondingly weakened or because of perceived deleterious effects on the work of the school. The balancing process includes being sensitive to parent preferences, but also providing leadership and educating parents in order to gain acceptance for the educationally desirable without manipulating them. Litwak and Meyer (1974) developed a balance theory based on the premise that school and home have to be close enough to coordinate their activities, but if they become too close they can destroy each other because of their differing value systems. While the latter part of the premise seems to overstate the case, particularly as the value systems of home and school have tended to come closer together, there can be little argument with the first part of the premise which, stated in different terminology, calls for "a balanced distance . . . for maximum education advantage" (p. 53) or some midpoint close enough to be mutually supportive but not so close as to impair professional performance.

Similarly, Mann (1976) while arguing for a more representational (or delegate) orientation in principals to redress the domination of the trustee orientation, concludes (p. 130) that principals need sufficient discretion to achieve a balance suitable for their particular circumstances. Bidwell (1965) was conscious of the need for parent support while maintaining sufficient distance to maintain the school's authority and discretion and wrote of reconciling responsiveness with the need to prevent client demand from defining client welfare. Morris et al. (1981) found an understanding in schools that parent involvement was to be kept in balance because of its potential for destabilizing the school. Goldring (1986) has recently published evidence that principals seek a balance. Where parents were eager to participate, principals had more negative attitudes toward them, while principals whose parents were unresponsive reported greater engagement with them in order to promote their participation.

With regard to the other two primary constituencies, the principal also has to establish a balance that promotes the interests of the school and does not alienate them. Teachers have to be allowed sufficient autonomy and influence to satisfy them and promote the best performance of duties while being sufficiently controlled or led in order to prevent goal displacement and excessive "unofficial benefits," slackness, or opposition (Crow, 1984). The principal must ensure parents are satisfied with teacher responsiveness to them while also ensuring teacher expectations for buffering against undue parent interference are met. Superordinates have to be allowed sufficient

influence to satisfy their responsibilities but not so much as to threaten the autonomy the principal needs for maximizing achievement of the school's goals in its individual circumstances (Crow, 1984). As the school system's most important link to parents, the principal has to strike a balance between representing parents (and teachers) to the system and promoting the system's interests with parents; and between responsiveness to parents while at the same time buffering superordinates and staff against unwanted parental influence.

Crucial determinants of the appropriate balance among the primary constituencies are the objectives of the school and the individual principal's dispositions and capacities. Thus Hallinger and Murphy (1986) report findings in contrast to Goldring. Their schools with higher socioeconomic clientele were more open to parents and the principals encouraged parental influence, while principals with a lower socioeconomic clientele shut out the parents and did little to involve them. The schools they studied were effective schools in which the appropriate balance of parental influence was determined by an overriding imperative of achievement in basic skills. The principal has also to strike a balance with which she or he can live, that is, one attuned to the principal's own dispositions and abilities. As the key agent in achieving and maintaining the balance, the principal must be comfortable with it in operation. The principal should adopt an administrative style which achieves the desired balance of primary constituency influences according to the circumstances and his or her own qualities—a contingency approach. Thus Peterson (1983) found, for example, that principals from schools with a more assertive higher socioeconomic clientele were more autonomous. Willower (1982) makes the point that observation studies showing principals spending only 5 or 10 percent of their time on environment matters might indicate nothing more than a placid situation in which community and superordinate expectations are easily met. Summerfield (1971) developed the "rule of best fit" from his findings—the principal's political style has to match the neighborhood.

The major balance to be achieved by the principal is among teachers, superordinates, and parents. The chief criterion in achieving the balance should be what best facilitates achievement of the school's goals (assuming those goals embody the best interests of the students). The principal should adopt the administrative style most conducive to achievement of this balance but in doing so will be circumscribed by his or her own dispositions and abilities.

Various societal forces, trends in organizational practice, the reality of schools as relatively autonomous subunits, and the findings of research on effective schooling all indicate that discretion at the school level should be increased. As the research of Ewanyshyn (1986) demonstrates, in Alberta there has been a continuing shift of power to the principalship. In the United States Ornstein (1980) has monitored the continuing decentralization of educational administration and the National Governors' Association is promoting greater school site autonomy (Lamm, 1986). In England and Wales the long standing commitment to building the individual identity of school has recently been reinforced by further legislative enactments incorporating the recommendations of the 1984 green paper (HMSO, 1984). In Australia the various states have been moving to allow greater school autonomy with Victoria leading the way (Chapman & Boyd, 1985). Often moves to build school autonomy are accompanied by efforts to involve parents or the local community and teachers in school governance. This can enhance school autonomy even further because the school community can be a considerable power base. But involving the school community in governance means that, along with power, accountability is also devolved to the school level. In this light, the growing influence of parents on the principal and schools can be seen as

part of a process of evolving checks and balances.

For the school system, there is a dilemma. While the system must recognize pressures for school autonomy and greater principal discretion, particularly as there are educational advantages, it also has its own responsibilities, often legislatively mandated, to discharge. These responsibilities involve ensuring that schools pursue school system goals and objectives and the coordination of school activities and administration where there is advantage to schools overall or in pursuit of overriding societal goals such as equity. In simple terms the school system needs to promote school independence while ensuring schools do as required.

The school system resolves the dilemma with two strategies. The principal is expected to manage the potential power given to the school community (mainly parents and teachers) in the interests of the school system. At the same time, by insisting on principal responsiveness to parents and promoting parent participation, the school system establishes an effective control on the principal's behavior through local accountability. The influence of parents can generally be expected to be conservatively oriented and thus a constraint for principals. Where the school system needs to move schools in desired directions, it can do so not only by bringing pressure to bear directly on principals who then have the responsibility of leading parents, but also by educating parents so that their influence on principals and schools is in the desired direction. That is, parent beliefs and attitudes can be fostered with a view to their being translated into parent expectations of the school.

Conclusion

The research reported in this article clearly demonstrated, for the district examined, the considerable influence that the school's parents have on elementary principal work behavior and, through the principals, on school operations. This influence can be viewed as a control mechanism forming part of the web of mechanisms which the district uses to control schools through the behavior of principals. It is part of the district control system because the system fosters the susceptibility of principals to parental influence in a number of ways.

While there must be great caution in generalizing the findings, they do suggest that parents are a major influence on principals and schools, ranking behind only superordinates and staff in strength of influence. Any adequate account of schools as organizations, and of principals' work, should recognize this. These three sources of influence are the principal's major constituencies and the task for the principal, in leading an effective school, must be to establish an appropriate balance among these interests by creating a community of interest. The school district, in order to meet its responsibilities for setting directions for, and coordinating, schools must be able to control principal behavior. In view of the growing autonomy of school communities and expectations for principal leadership, it can best do so through indirect means such as facilitating parental influence on principals. It can ensure that this influence serves the school system's purposes by creating a climate of expectations for schools among all concerned.

References

- Allison, D.J. (1983). Toward an improved understanding of the organizational nature of schools. *Educational Administration Quarterly*, 19, 7-34.

- Berman, P., & McLaughlin, M.W. (1976). Implementation of educational innovation. *Educational Forum*, IV(3), 345-370.
- Bidwell, C.E. (1965). The school as a formal organization. In J. March (Ed.), *Handbook of organizations* (pp. 972-1023). New York: Wiley.
- Boyd, W.L. (1978). The changing politics of curriculum policy-making for American schools. *Review of Educational Research*, 48, 577-628.
- Bridges, E.M. (1982). Research on the school administrator: The state of the art, 1967-80. *Educational Administration Quarterly*, 18, 12-33.
- Brieschke, P.A. (1985). Principals in schools: Insubordination in discretionary decision making. *Educational Forum*, 49, 158-169.
- Chapman, J., & Boyd, W.L. (1985). *Decentralization, devolution and the school principal. Australian lessons on state-wide educational reform*. Revised version of a paper presented at AERA, Chicago.
- Crow, G.M. (1984). *Alternative forms of adjustment: The case of the elementary principalship*. Paper presented at AERA, New Orleans. (Eric Document Reproduction Service No. ED 245323)
- Crowson, R.L., & Porter-Gehrie, C. (1980). The discretionary behavior of principals in large city schools. *Educational Administration Quarterly*, 16, 45-69.
- Dill, W.R. (1958). Environment as an influence on managerial autonomy. *Administrative Science Quarterly*, 2, 409-433.
- Duke, D.L., & Stiggins, R.J. (1985). Evaluating the performance of principals: A descriptive study. *Educational Administration Quarterly*, 21, 71-98.
- Edmonds, E. (1987). Parent power in English education. *CSSE News*, 14(2), 3-5.
- Ewanyshyn, E. (1986). *Control over educational decisions*. Unpublished doctoral dissertation, University of Alberta.
- Firestone, W.A., & Herriott, R.E. (1982a). Prescriptions for effective elementary schools don't fit secondary schools. *Educational Leadership*, 40, 51-53.
- Firestone, W.A., & Herriott, R.E. (1982b). Two images of schools as organizations: An explication and illustrative empirical test. *Educational Administration Quarterly*, 18, 39-59.
- Goldring, E.B. (1986). The school community: Its effects on principals' perceptions of parents. *Educational Administration Quarterly*, 22, 115-132.
- Grassie, M.C. (1979a). *Schools and their environments—An exploratory study of attributed influence*. Report to the ERDC, Australia. Copy supplied by author.
- Grassie, M.C. (1979b). Why should I listen to him? What does he know about it? *Administrators' Bulletin*, 10(8).
- Greenfield, W.D. (1982). *Research on public school principals: A review and recommendations*. Washington: NIE. (ERIC Document Reproduction Service No. ED 224178)
- Griffith, D.E. (1985). Administrative theory. In *The handbook of research on educational administration*. Paper distributed by author at seminar, University of Alberta, 1987.
- Hallinger, P., & Murphy, J.F. (1986, May). The social context of effective schools. *American Journal of Education*, 328-355.
- HMSO. (1984). *Parental influence at school. A new framework for school government in England and Wales*. London: Cmnd. 9242.
- Lamm, R.D. (1986). Can parents be partners? *Phi Delta Kappan*, 211-213.
- Lindblom, C.E. (1968). *The policy-making process*. Englewood Cliffs, NJ: Prentice-Hall.
- Lipsky, M. (1980). *Street-level bureaucracy. Dilemmas of the individual in public services*. New York: Sage.
- Litwak, E., & Meyer, H.J. (1974). *School, family and neighborhood: The theory and practice of school-community relations*. New York: Columbia University.
- Lortie, D. (1975). *Schoolteacher: A sociological study*. Chicago: University of Chicago Press.

- Mann, D. (1975). School boards and power in local communities. In P.J. Cistone (Ed.), *Understanding school boards* (pp. 161-172). Lexington, MA: Heath.
- Mann, D. (1976). *The politics of administrative representation: School administration and local democracy*. Lexington, MA: Heath.
- March, J.G. (1978). American public school administration: A short analysis. *School Review*, 218-234.
- March, J.G. (1981). Footnotes to organizational change. *Administrative Science Quarterly*, 26, 563-577.
- Meyer, J.W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83, 340-363.
- Moore, M.T. (1975). *The boundary spanning role of the urban school principal*. Unpublished doctoral dissertation, University of California at Los Angeles.
- Morris, V.C., Crowson, R.L., Hurwitz, E., & Porter-Gehrie, C. (1981). *The urban principal. Discretionary decision-making in a large educational organization*. Report to NIE. (ERIC Document Reproduction Service No. ED 207178)
- Morris, V.C., Crowson, R.L., Hurwitz, E., & Porter-Gehrie, C. (1982). The urban principal: Middle manager in the educational bureaucracy. *Phi Delta Kappan*, 689-692.
- Morris, V.C., Crowson, R.L., Hurwitz, E., & Porter-Gehrie, C. (1984). *Principals in action: The reality of managing schools*. Columbus, OH: Merrill.
- Murphy, J. (1986). Review of *Principals in action: The reality of managing schools* by Morris et al. (1984). *Educational Administration Quarterly*, 22, 125-128.
- Ornstein, A.C. (1980). Decentralization and community participation policy of big school systems. *Phi Delta Kappan*, 62, 255-257.
- Payne, C.H. (1987). Parents and control of elementary school principal work behavior. Unpublished doctoral dissertation, University of Alberta.
- Peters, T.J., & Waterman, R.H. (1984). *In search of excellence. Lessons from America's best run companies*. New York: Warner Books.
- Peterson, K.D. (1983). *Mechanisms of administrative control in educational organizations: An exploratory study*. Final report to NIE. (ERIC Document Reproduction Service No. ED 238192)
- Peterson, K.D. (1984). Mechanisms of administrative control over managers in educational organizations. *Administrative Science Quarterly*, 29, 573-597.
- Purkey, S.C., & Smith, M.S. (1983). Effective schools: A review. *Elementary School Journal*, 23, 427-452.
- Rossmiller, R.A. (1986a). Some contemporary trends and their implications for the preparation of educational administrators. *UCEA Review*, 27(1), 2-3.
- Rossmiller, R.A. (1986b). *Achieving equity and effectiveness in schooling*. Paper distributed at seminar at University of Alberta, March 17, 1987, first presented at IIP, 1986.
- Schwartz, A.M. (1981). *The principal as boundary administrator: A field study of inner-city schools*. Unpublished doctoral dissertation, University of Toronto.
- Stringham, B.L. (1974). *The school act, 1970: A case study of public policy making in education*. Unpublished doctoral dissertation, University of Alberta.
- Summerfield, H.L. (1971). *The neighborhood based politics of education*. Columbus, OH: Merrill.
- Tyler, R.W. (1983). Studies of schooling. A place called school. *Phi Delta Kappan*, 64, 462-464.
- Weick, K.E. (1976, March). Educational organizations as loosely-coupled systems. *Administrative Science Quarterly*, 21, 1-19.
- Willower, D.J. (1982). School organizations: Perspectives in juxtaposition. *Educational Administration Quarterly*, 18, 89-110.
- Wirt, R.M., & Kirst, M.W. (1982). *Schools in conflict*. Berkeley, CA: McCutchan.

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Characteristics of Study Notes Prepared by Elementary School Children: Relevancy and Efficiency

The characteristics of study notes prepared by children were examined. Grades 4 and 8 students read prose passages and prepared study notes for a subsequent test in which they would be asked to recall four different attributes of different kinds of bears. In general, students' notes at both grade levels contained more task relevant than task irrelevant information. However, only 35% of the students even at grade 8 recorded task relevant information to the exclusion of irrelevant information (selective note taking); 40% of the grade 8 students copied both relevant and irrelevant information to the same degree. Grade 4 students tended to record information verbatim, whereas grade 8 students tended to be more efficient at note taking, writing many facts using fewer words. It was also demonstrated that many grade 4 students could be easily induced to use the highly selective and more efficient note taking strategy.

According to Brown, Bransford, Ferrara, and Campione (1983), previous research concerning children's learning in school settings has focused on how well students do on tests, rather than on what activities children engage in while studying. One common activity to use in school when studying is that of taking notes. In this context, then, the present research was conducted to characterize study notes prepared by children while reading prose passages for a later test.

Two functions of note taking have been identified in the research. One frequently suggested by college students as well as by researchers is that the process of taking notes will facilitate the learner's subsequent recall (Hartley & Davies, 1978; Howe,

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1974). Another function of note taking is to keep a record of information gained through listening to a lecture or reading a text for a subsequent review (Hartley & Davies, 1978; Howe, 1974; Rohwer, 1984). This second function of note taking is the focus of the present research.

What are some characteristics of children's notes that may be useful for investigation? One important feature of good study notes is that they contain information relevant to performance objectives to the exclusion of task irrelevant information (note relevancy). If the notes include only the task relevant information, students will not have to decide which parts to study in a later review situation. In addition to screening information, a note taker does not have to copy the task relevant information verbatim. Since study notes are simply for one's own use, the use of point form, thereby eliminating redundant words and phrases, permits the notes to be written more quickly (note efficiency). Copying task relevant information by deleting redundant words represents the simplest form of note taking strategies (Brown, Day, & Jones, 1983). These two characteristics (relevancy and efficiency) conform to two important decisions that students must make when they take notes, namely: (a) what information should be included in notes, and (b) in what form (Hartley & Davies, 1978). In light of these considerations, children's notes were characterized in the present research in terms of their relevancy and efficiency.

The two studies reported here were patterned after an experiment conducted by Tumolo and Kobasigawa (1976). In that study, grades 3, 5, and 7 children were asked to read and take notes on prose passages containing factual information (attributes of different bears) in preparation for a test. These investigators reported that the percentage of relevant facts contained in children's notes increased with age. For example, 63% of children's notes contained relevant facts at grade 3, while the corresponding figure was 73% at grade 7. This finding even for the grade 7 level, however, is not particularly impressive when we consider that nearly 70% of the facts included in the original reading passage were task relevant. Apparently, many of the students in the Tumolo and Kobasigawa study used a nonselective strategy, copying both relevant and irrelevant facts in their notes. With regard to note efficiency, it was found that the number of students copying the information in the passage verbatim clearly decreased between grades 5 and 7, whereas the difference between grades 3 and 5 was not significant.

To investigate further the characteristics of children's notes, two studies were carried out using grades 4 and 8 students. While general procedures and reading materials were similar to those used in the previous study (Tumolo & Kobasigawa, 1976), there were several differences between the present and previous investigations. First, the same number of task relevant and task irrelevant facts were included in the present reading material so that the relevancy of notes could be compared with the irrelevancy of notes more directly. Second, in the previous study the same amount of study time for taking notes was used regardless of grade. A pilot study was conducted to determine the time needed for note taking for respective grades, and the time allotted for each grade level in the present research was adjusted accordingly. Third, students were given only one trial to prepare notes in the previous experiment, whereas participants were given two trials to make notes in the present research. An additional trial was included to ensure that younger students were familiar with the procedure.

Study 1 was concerned with the manner in which children would spontaneously prepare notes when they had received instructions as to kinds of questions they would have in a later test (performance objectives). To demonstrate the replicability of our data, findings from a replication study are also provided in Study 1. Study 2 was

conducted to explore why some students do not take notes selectively or efficiently.

Study 1

Method

Participants. The participants were 25 grade 4 (\bar{X} CA=9.9 years) and 25 grade 8 (\bar{X} CA=13.9 years) students drawn from a predominantly middle-class parochial school in Windsor, Ontario. The participants for our replication study consisted of 20 grade 4 and 20 grade 8 students of comparable chronological ages drawn from a parochial school located in the outskirts of Windsor, Ontario. Within each grade, approximately half of the students were male and half were female. According to their teachers' judgments, none of the participants should have had difficulty in reading the materials used in the present research.

Materials. The materials prepared for each student were two story booklets, a note taking booklet, and a test sheet. The first story booklet consisted of two pages: a cover sheet and a page containing the instructions and the reading passage. The instructions indicated the task objectives and stated: "This is the first of two stories about different types of bears. You have to remember where each kind lives, what each kind eats, how fast each kind can run, and how much each kind weighs." These instructions, then, "defined" what kinds of factual data in the reading material would constitute task relevant information. The reading passage consisted of two paragraphs (111 words long) describing various characteristics of grizzly and polar bears, with the readability at a grade 3 level (Spache, 1953). The passage contained 11 task relevant facts (bears' food, weight, speed, and location) as well as 11 task irrelevant facts (e.g., bears' temperament, life expectancy, color). These pieces of task relevant and irrelevant information were randomly arranged in the reading material. The second story booklet was constructed in the same manner as the first except that its reading passage contained information about major characteristics of black and brown bears.

The note taking booklet consisted of three pages: a cover sheet with a space for a participant's name, grade, and birth date and two pages on which students prepared their notes. The test sheet contained 32 completion items (e.g., Brown bears can run — miles per hour) designed to assess children's recall of 21 task relevant and 11 task irrelevant facts.

Procedure. The students were tested in their respective classes. Each student received a package of the two story booklets (sets 1 and 2) and the note booklet. The experimenter initially told the students that they would read two stories about different types of bears and have an opportunity to make notes for a subsequent review.

The experimenter then told the students to turn to the first page of the first story booklet and read the instructions and passage with students. The instructions, as stated previously, described four types of questions (i.e., bears' food, speed, weight, and location) that would appear in a subsequent test. Grade 4 students were then given 10 minutes to read and take notes while grade 8 students were given five minutes. (In a pilot study, grade 4 students needed approximately twice as long as grade 8 students to read and copy a comparable passage.) This procedure was repeated for the second booklet.

Just to be consistent with the initial instructions that the notes would be prepared for a subsequent review, the students were given five minutes to examine their notes. This was followed by a 10-minute recall test. The entire test session was supervised by the experimenter and one adult assistant.

Scoring. Each child's notes for each trial were scored for note relevancy, irrelevancy, and efficiency. A note relevancy score was obtained by counting the number of task relevant facts recorded in the child's notes (i.e., 11 attributes contained in each set of booklets describing the bears' food, speed, weight, and location). When more than one fact defined the relationship between a particular type of bear and "items" (e.g., Polar bears eat *seals* and *walruses*), each fact was counted separately. A note irrelevancy score was defined as the total number of irrelevant facts recorded in notes (i.e., 11 attributes contained in each set of booklets describing the bears' temperament, color, life expectancy). Thus on each note taking trial, the maximum relevant or irrelevant score was 11. These two types of scores were used to examine the selective aspect of students' note taking behavior.

A note efficiency score was obtained by dividing the total number of words contained in the notes by the total number of relevant and irrelevant facts recorded in the notes (see also Howe, 1970). Consequently, a child's note taking was judged to be more efficient when the obtained ratio was lower.

Results and Discussion

Relevancy. The mean relevancy and irrelevancy scores for grades 4 and 8 students on each trial are presented in Table 1. Because the number of students sampled was different between the two schools, these data were analyzed by the general linear models procedure described in the Statistical Analysis System (Type III SS, 1979). Variables involved in the analysis were school (2), grade (2), relevancy-irrelevancy (2), and trial (2), the last two being within-subject variables. Follow-up mean comparisons were made using the Tukey (A) test (Cicchetti, 1972).

The most pertinent finding to the present study was that, irrespective of school, grade, or trial, students' notes contained more task relevant facts ($\bar{X}=9.61$) than task irrelevant facts ($\bar{X}=5.12$), and consequently, the main effect of note relevancy was significant, $F(1,86)=127.27, p<.001$. Interactions involving the relevancy variable were not significant.

Next, for each child, the number of relevant facts recorded was divided by the total number of relevant and irrelevant facts included in the notes (trial 2). Children whose proportion scores thus obtained were .85 (e.g., notes containing 11 relevant facts and 2 irrelevant facts) or higher were judged to have allocated their note taking effort exclusively or nearly exclusively to the recording of the relevant facts (highly selective strategy). In contrast, those children whose proportion scores were between .45 and .55 were judged to have used a nonselective strategy copying everything in an indiscriminate manner. After combining the data from the two schools, 27% of the grade 4 and 38% of the grade 8 students used the highly selective note taking strategy (i.e., proportion scores .85 or higher), whereas 33% of the grade 4 and 38% of the grade 8 students used the nonselective strategy. The age-related differences reported here were not statistically reliable. However, these data indicate that about one-third of children recorded information in an indiscriminate manner, although the group scores suggested, as previously described, students' notes contained more task relevant than task irrelevant items.

Efficiency. The mean efficiency scores for grades 4 and 8 students on each trial are summarized in Table 2. These scores were analyzed by the general linear models procedure involving variables of school (2), grade (2), and trial (2), the last factor being a within-subject variable. Students in School B ($\bar{X}=4.05$) were significantly more efficient than those in School A ($\bar{X}=4.42$), $F(1,86)=5.47, p<.02$. A main effect of grade and an interaction of grade by trial were significant, $F(1,86)=114.10, p<.001$ and

TABLE 1
Mean Relevancy and Irrelevancy Scores
for Grades 4 and 8 Students (Study 1)

		Trial 1		Trial 2	
		Relevancy	Irrelevancy	Relevancy	Irrelevancy
School A	Grade 4 (<i>N</i> =25)	6.80	3.44	8.96	5.04
	Grade 8 (<i>N</i> =25)	10.84	6.60	10.64	6.84
School B	Grade 4 (<i>N</i> =20)	8.85	3.90	9.40	4.55
	Grade 8 (<i>N</i> =20)	10.70	5.50	11.00	4.70

Note: highest possible relevancy and irrelevancy = 11

TABLE 2
Mean Efficiency Scores for Grade 4 and 8 Students (Study 1)

		Trial 1	Trial 2
School A	Grade 4 (<i>N</i> =25)	5.37	5.38
	Grade 8 (<i>N</i> =25)	3.52	3.40
School B	Grade 4 (<i>N</i> =20)	4.53	5.04
	Grade 8 (<i>N</i> =20)	3.34	3.29

Note: A note efficiency score = total number of words in notes/total number of facts in notes. The lower score indicates more efficient note taking by students.

F (1,86)=5.26, *p*<.02, respectively. This significant interaction emerged because grade 4 students' note taking became slightly less efficient with trial (trial 1 \bar{X} = 4.99 and trial 2 \bar{X} = 5.23) while grade 8 students' note taking became slightly more efficient with trial (trial 1 \bar{X} = 3.44 and trial 2 \bar{X} = 3.35). On each trial, grade 8 students were significantly more efficient than grade 4 students, *p*<.01. Because there were 22 facts in each story booklet with 111 words, the efficiency score would be 5.32 if students copied the text verbatim. Grade 4 students' efficiency scores suggest, then, that many of these students copied the text word-for-word, as illustrated by Example 1 in Table 3. In contrast, nearly 80% of the grade 8 students utilized point form as illustrated by Example 2.

Although both grades 4 and 8 students copied significantly more relevant than irrelevant facts, only a small proportion of them selected relevant material exclusively. Why did they not copy relevant material exclusively? One reason may be that these students were not able to discriminate relevant from irrelevant material. This, however, is unlikely. When grade 4 students in a preliminary study were explicitly asked to select those units of the passage relevant to each of the four questions one at a time, they underlined 85% of the relevant factual data, but no irrelevant material.

Another reason may be that the nonselective strategy is much easier to use than the selective strategy. To use the selective strategy, a child must keep in mind the performance objective during an entire period of note taking and decide whether a particular fact is relevant or irrelevant. Perhaps this may be a difficult task for grade 4

TABLE 3
Examples of Study Notes*

Example 1

Many polar bears weigh about 1200 pounds. They eat seals and walruses. Polar bears can run as fast as 25 miles per hour. They live in areas around the Arctic Ocean.

Example 2**

Polar (Bears)
 (live)—Arctic Ocean
 (eat)—seals, walruses
 (run)—25 mph
 (weigh)—1200 pounds

*Both of these notes are equally selective, recording only task relevant facts. However, Example 2 is more “efficient” than Example 1, containing fewer words.
**A few grade 8 students deleted the words in parentheses.

students to carry out. Some of the older students, in contrast, may not show the selective note taking because they now have skills to use point form or to pick up “key words” that enable them to write down everything in the allotted study time. In addition, the tendency to use the nonselective strategy may reflect students’ assumption that information not stressed at the outset may nevertheless appear on a later test.

In view of these considerations, Study 2 was conducted. To examine whether grade 4 students have the ability to use the highly selective strategy, half of them were explicitly instructed to write down only task relevant information in their study notes while the remaining children were tested using the same procedure as used in Study 1. Study 1 also showed that grade 4 students were likely to copy information verbatim, although grade 8 students were likely to delete redundant words. This age-related difference in note efficiency may simply reflect age-related differences in usual note taking practices in classrooms rather than in their basic abilities. To determine this possibility, as a last task, all of the grade 4 students were explicitly asked to use point form.

It was argued previously that grade 8 students, because they were efficient at note taking, might have had sufficient time to copy everything, and consequently some of them were not selective in note taking. In other words, older students may show more selective note taking behavior if given a longer passage with more relevant facts to record than the passage used in Study 1. Based on this reasoning, half of the grade 8 students in Study 2 received longer booklets containing more relevant facts while the remaining students received the same booklets used in Study 1.

Finally, a second session was included in which both grades 4 and 8 students were interviewed to assess their ideas about note taking strategies.

Study 2

Method

Participants. The participants were 25 grade 4 (\bar{X} CA=9.9 years) and 26 grade 8 (\bar{X} CA=13.9 years) students drawn from a predominantly middle-class parochial school in Chatham, Ontario. Within each grade, approximately half of the participants were male and half were female. Twelve grade 4 students were randomly assigned to a control condition in which they were tested using the same procedures as used in Study 1, whereas the remaining 13 students were assigned to a condition in which they were explicitly instructed to be selective in their note taking (explicit condition). Fourteen grade 8 students were randomly placed in a control condition in which they received the same reading material used in Study 1 while the remaining 12 grade 8 students were placed in a condition in which they received longer story booklets (longer story condition).

Materials. The story booklets, note taking booklets, and test sheets were identical to those used in Study 1. For the grade 8 students in the longer story condition, however, two sets of longer story booklets were prepared. The reading passage of each of the longer story booklets contained three paragraphs describing major characteristics of three types of bears. Two of these bears were identical to those included in the shorter version of story booklets. While the shorter version contained 11 relevant and 11 irrelevant facts, the longer version contained 18 relevant and 18 irrelevant facts. The test sheet for the longer story condition also consisted of completion items: 36 items assessed children's recall of relevant material and 16 items assessed children's recall of irrelevant material.

Procedure. There were two sessions in Study 2. The characteristics of students' notes were obtained in the first session. Children's ideas about note taking and grade 4 students' ability to use point form were assessed in the second session.

During the first session, participants were tested in groups of 12 to 14 by two experimenters. Each group consisted only of students in the same note taking condition and grade level. The procedures were identical to those used for Study 1 with the addition to be described. Similar to the first study, students received two story booklets and a note booklet appropriate to their assigned conditions. The experimenter then told students to read stories and make notes, and explained why they would need their notes later. The grade 4 students in the explicit condition were additionally told to pay special attention to the reading material related to the four questions that would appear in a subsequent test. They were instructed to write down only the answers to the four questions. Similar to Study 1, grade 4 students had two 10-minute note taking trials while grade 8 students had two 5-minute note taking trials.

On the following day (i.e., second session), children were interviewed individually to assess their ideas about note taking strategies. They were asked (a) whether they had copied information not asked for by the performance objectives and why, and (b) which method would be better to use, a nonselective strategy copying both relevant and irrelevant facts or a selective strategy copying only relevant information. Grade 4 students were then shown a sample of study notes written in point form (see Example 2, Table 3) and given a new story booklet that contained both relevant and irrelevant facts. They were asked to prepare study notes (where sun bears live, what sun bears eat, how fast sun bears can run, and how much sun bears weigh) "in the same way the study notes (Example 2) are done for polar bears."

Scoring. Each child's notes were scored for note relevancy, irrelevancy, and efficiency for each trial separately using identical procedures to those used in Study 1. Because numbers of facts contained in the shorter and longer versions of booklets

were different, proportion scores were obtained for the analyses of grade 8 students' data by dividing the note relevancy scores (note irrelevancy scores) by the appropriate number of relevant (irrelevant) facts contained in the story booklets.

Results

Relevancy. The data for Study 2 were analyzed in terms of the general linear models procedure (SAS, 1979). Each of the analyses involved one between-subject variable (grade or group) and two within-subject variables (relevancy-irrelevancy and trial). Because the main interest of the analyses was to determine the presence or absence of a significant main effect of relevancy and a significant interaction of relevancy by grade (or group), only these results will be summarized.

First, grade 4 and grade 8 control groups were compared to examine whether older children were more selective than younger children in their note taking activities. The analysis of the data revealed that the main effect of relevancy was significant, $F(1,24) = 21.94$, $p < .001$, as was the interaction of relevancy by grade, $F(1,24) = 4.65$, $p < .05$. This significant interaction indicated that grade 8 control children attained significantly higher relevancy scores ($\bar{X} = 10.53$) than irrelevancy scores ($\bar{X} = 5.50$), $p < .01$, whereas grade 4 control children showed comparable relevancy ($\bar{X} = 9.67$) and irrelevancy ($\bar{X} = 7.80$) scores. Approximately 30% of the grade 8 and 0% of the grade 4 control subjects used the highly selective strategy while 43% of the grade 8 and 67% of the grade 4 students used the nonselective strategy recording both relevant and irrelevant facts equally frequently.

Second, one question raised in Study 2 was "Do grade 4 children have the ability to select task relevant information to the exclusion of irrelevant information?" To examine this question, grade 4 control and explicit groups were compared. Both the main effect of relevance and an interaction of relevancy by group were statistically reliable, $F(1,23) = 42.98$ and $F(1,23) = 14.42$, respectively, $ps < .001$. The significant interaction reflects the fact that grade 4 students copied significantly more of the relevant ($\bar{X} = 10.85$) than irrelevant ($\bar{X} = 3.85$) facts when they were explicitly instructed to be selective (explicit group), but they did not show such selectivity under a spontaneous condition (control group). Under the explicit condition, approximately 70% of the grade 4 students used the highly selective strategy at least on one trial. About 15% of the grade 4 children still used the nonselective strategy even under the explicit condition.

Third, another question raised in Study 2 was "Do grade 8 students show better selectivity by not recording task irrelevant information if the quantity of factual data is increased?" This question was examined by comparing the grade 8 control group with the grade 8 "longer story" group. Because the number of facts contained in the reading materials was different between these two groups, the relevancy and irrelevancy scores were transformed into proportion scores (e.g., number of relevant facts copied in notes divided by the number of relevant facts contained in the text). The analysis revealed that the main effect of relevancy was significant, $F(1,24) = 67.33$, $p < .001$; grade 8 students wrote down relevant facts ($\bar{X} = .96$) more frequently than irrelevant facts ($\bar{X} = .41$). As expected, students in the longer story group copied relatively fewer irrelevant facts ($\bar{X} = .33$) than those in the control group ($\bar{X} = .50$), although this difference was not statistically reliable. As compared with the grade 8 control subjects (selective strategy users = 30% and nonselective strategy users = 43%), more of the grade 8 students in the longer story group (50%) used the selective strategy and fewer of them (8%) used the nonselective strategy.

Efficiency. Efficiency scores were initially examined by comparing the two control groups (grade 4 vs. grade 8) to determine whether age-related differences in note efficiency observed in Study 1 would be found in Study 2. The analysis involved one between-subject variable (grade) and one within-subject variable (trial). As was found in Study 1, grade 8 students ($\bar{X}=3.66$) obtained significantly better efficiency scores than grade 4 students ($\bar{X}=4.51$), $F(1,24)=4.83$, $p<.05$. In addition, students at both grade levels were significantly more efficient at note taking on trial 2 ($\bar{X}=3.91$) than on trial 1 ($\bar{X}=4.19$), $F(1,24)=5.64$, $p<.03$.

One question raised in Study 2 concerning note efficiency was whether grade 4 children could be induced to attain better efficiency scores by merely showing them an example of highly efficient study notes. To this end, grade 4 students were exposed to such notes at the end of the second session and prepared their own notes regarding a new story (hereafter trial 3). After combining the two groups of grade 4 (control and explicit), mean efficiency scores were 4.52, 4.02, and 3.08 for trials 1, 2, and 3, respectively. The analysis of these scores revealed that grade 4 children obtained significantly better efficiency scores on trial 3 than on trial 1, $p<.05$, indicating that brief exposure to efficient notes was sufficient to improve younger children's note taking behavior. It is also interesting that no grade 4 children recorded any task irrelevant information in their study notes prepared on trial 3, demonstrating that these children had the ability to use the highly selective note taking strategy.

Interview data. One purpose of the interview questions was to find out why children include task irrelevant information in their notes. Thus those children (20 grade 4 and 18 grade 8 students) who recorded irrelevant information were asked why they copied material unrelated to the performance objective (four specific questions). The most frequent answer was that "irrelevant facts" might be asked in the test (81% of grade 4 and 72% of grade 8). Other major reasons were "I had extra time" and "they were important to me."

Another purpose of the interview was to obtain information concerning how children assess the relative usefulness of two strategies, a nonselective strategy copying both relevant and irrelevant information and a selective strategy copying only relevant information. One interesting observation was that grade 4 children in the control group and those in the explicit group tended to give different assessments; 67% of the control children indicated that the nonselective strategy was better while 77% of the explicit children said that the selective strategy was better. This difference was statistically significant, $p<.05$ (Fisher's exact probability test). Like the grade 4 children in the explicit group, a large majority of the grade 8 students (88%) thought that the selective strategy would be more useful.

Many children (67%) who selected the nonselective strategy justified their choice by referring to its benefit for the test situations ("You may need them for the test," "So you don't miss anything for the test"). Some of the students indicated that the nonselective strategy would be better because "you don't have to think about what to write down." Most of the younger students (70%) who selected the selective strategy said that this strategy would be useful because of the time factor during note taking while most of the older students (70%) said that such note taking strategy would facilitate subsequent study.

General Discussion

The present research was conducted to characterize children's notes prepared for a subsequent review for a test. The following two characteristics are of particular interest: (a) the extent to which children selectively record task relevant material in their notes, and (b) the efficiency with which children record factual data.

With regard to the selectivity, students' notes prepared under spontaneous situations revealed three major types of note taking strategy users: (a) those who recorded task relevant information to the exclusion of irrelevant information (selective strategy); (b) those who recorded mainly relevant information but also added some irrelevant information (partially selective strategy); and (c) those who copied both relevant and irrelevant information to the same degree (nonselective strategy). As one may expect from previous studies on children's selective attention, (e.g., Hagen & Hale, 1973), more of the grade 4 (67%) than grade 8 (43%) students tended to use the nonselective strategy in Study 2. On the other hand, grade 4 students in Study 2 rarely used the highly selective strategy while about 30% of the grade 8 students did so. However, the present research also has shown that younger children's lack of selectivity is somewhat dependent on schools.

Unlike the findings of Study 2 (67%), the percentage of grade 4 students who used the nonselective strategy was smaller (40%) in Study 1. Furthermore, about 30% of the grade 4 children in that study copied the relevant information exclusively. As a result, grade 4 students in Study 1, just as grade 8 students did, recorded significantly more relevant than irrelevant facts in their notes. However, the present research (3 schools involved) as well as the Tumolo and Kobasigawa (1976) study (2 schools involved) indicated that only a small proportion (40% or less) of grade 7 or 8 students utilized the highly selective strategy, and approximately the same proportion (40%) of these older students used the nonselective strategy, copying both task relevant and irrelevant information to the same degree.

The highly selective strategy examined in the present research calls for children's skills to divide a reading passage into task relevant and irrelevant units in terms of an instructional objective given in the reading booklet. Our findings suggest that many children have the ability to carry out these skills by the time they reach grade 4. About 70% of the grade 4 students selected relevant facts exclusively when they received explicit instructions to do so (Study 2). In addition, no grade 4 children included even a single task irrelevant fact in their notes when they were requested to make notes using point form (Study 2). Given that many children had the ability to use a highly selective strategy, why did they not use that strategy spontaneously? Below we examine four factors leading to children's failure to use the selective strategy.

First, the use of the selective strategy assumes that children attend to the instruction that defines what information is task relevant. The use of the nonselective strategy may be, at least in part, due to children's failure to attend to the task demand. Second, children may use the nonselective strategy even when they attend to the performance criterion, as some of the grade 4 students indicated in Study 2, simply because they believe that this strategy is easier to use than the highly selective strategy. Third, even if children believe that their note taking should be selective, some of them still use the nonselective strategy and others may use the partially selective strategy, as many of these children think that task irrelevant information might be asked in the test. Fourth, whether children choose the nonselective or partially selective strategy may be affected by another factor, the children's assessment of task difficulty. Thus more of the grade 8 students in Study 2 used the nonselective strategy when the reading material contained 22 pieces of factual information (relatively easy to copy all)

than when it contained 36 pieces of factual information (relatively hard to copy all in the allotted time).

With regard to the second characteristic of study notes, this study as well as the Tumolo and Kobasigawa study clearly indicated that grade 8 students obtain consistently better efficiency scores than grade 4 students. In the case of the selective note taking strategy, the major task was to delete task irrelevant material. In the case of note efficiency, the most common strategy was to delete redundant words, especially the names of bears once they had been used as headings or at the beginning of each paragraph. A few grade 8 students obtained still better efficiency scores by deleting the word “bear” completely as the heading “polar” or “brown” is sufficient for indicating the content of the paragraph that follows, or by deleting such verbs as “live” and “weigh” because such phrases as “the Arctic Ocean” and “1200 pounds” are sufficient to imply that these pieces of information are related to “where bears live” and “how much bears weigh” respectively.

It is reasonable to assume that opportunities for note taking and the amount of learning material presented to students should increase with age. As a result, older students are likely to realize that copying information verbatim from the text would be an inefficient strategy to complete the task within the allotted time. In contrast, teachers of younger children are likely to present information in the form of full sentences and encourage students to copy the presented information verbatim. The observed age-associated differences in the present research in note efficiency probably reflects such age-related differences in note taking practices in school. It was demonstrated in Study 2 that grade 4 students could be induced to improve efficiency scores rather easily.

In summary, the present research shows that many grade 4 children are capable of (a) recording information in their notes selectively according to a performance objective, and (b) deleting redundant words or phrases to increase their note efficiency, although many of these children may not use these skills spontaneously. Initially, children presumably take study notes using a nonselective strategy, copying every piece of information verbatim (absence of both [a] and [b]). Eventually, children’s spontaneous note taking shows a shift from this strategy of “copy all verbatim” to a selective but inefficient strategy (absence of [b]) or to a nonselective but efficient strategy (absence of [a]). Because skills to make notes selectively and skills to make notes efficiently are available in grade 4 children if age-appropriate material is used, there is no logical sequence in which these two types of shifts should emerge. The available data, however, indicate that the former type is more likely to appear than the latter type. Although many grade 8 students appear to think that selective note taking is desirable, they also think that task irrelevant information may be asked in the test. As a result, only a small proportion of grade 8 students actually use the highly selective strategy. In contrast, efficient note taking is highly useful whether one uses the nonselective or selective strategy. Perhaps, for this reason, students rarely copy information verbatim by the time they reach grade 8.

The strategy of recording relevant material in notes by deleting unnecessary words and phrases is applicable to a wide variety of learning situations and, therefore, should be taught to young students. However, what is required for a student to do in using this “copy-delete” strategy (Brown, Day, & Jones, 1983) is merely to list important items in point form in the same sequence in which they appear in original materials or in lectures. In certain situations, though, the original material may be condensed more efficiently by combining several pieces of information from different paragraphs. In addition, notes sometimes can be made in a diagrammatic format

showing various relationships among different key concepts. How readily do young students learn to use these more advanced note taking strategies? Research is needed that includes learning materials that make more “cognitive transformational demands” (Rohwer, 1984) on students than those used in the present studies.

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References

- Brown, A.L., Bransford, J.D., Ferrara, R.A., & Campione, J.C. (1983). Learning, remembering, and understanding. In P.H. Mussen (Ed.), *Handbook of child psychology: Cognitive development*, Vol. III. New York: Wiley.
- Brown, A.L., Day, J.D., & Jones, R.S. (1983). The development of plans for summarizing texts. *Child Development*, 54, 968-979.
- Cicchetti, D. (1972). Extension of multiple-range tests to interaction tables in the analysis of variance. *Psychological Bulletin*, 77, 405-408.
- Hagen, J.W., & Hale, G.A. (1973). The development of attention in children. In A.D. Pick (Ed.), *Minnesota symposia on child psychology* (Vol. 7). Minneapolis: University of Minnesota Press.
- Hartley, J., & Davies, I. (1978). Notetaking: A critical review. *Programmed Learning and Educational Technology*, 15, 207-224.
- Howe, M.F.A. (1970). Using students' notes to examine the role of the individual learner in acquiring meaningful subject matter. *Journal of Educational Research*, 64, 61-63.
- Howe, M.F.A. (1974). The utility of taking notes as an aid to learning. *Educational Research*, 16, 222-227.
- Rohwer, W.D. (1984). An invitation to an educational psychology of studying. *Educational Psychologist*, 19, 1-14.
- SAS user's guide*. (1979). Cary, NC: SAS Institute.
- Spache, G.D. (1953). A new readability formula for primary grade reading materials. *The Elementary School Journal*, 53, 410-413.
- Tumolo, P.J., & Kobasigawa, A. (1976). *Note-taking behavior of primary school children*. Unpublished manuscript, University of Windsor.

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Why School Board Members Choose to Seek or Not Seek Reelection: A Test of Political Efficacy and Trust Theory

Political theorists have suggested that political efficacy and political trust are key factors in determining an individual's participation in the political process. This study investigated the relationship between school board members' feelings of efficacy and trust and their decision to seek or not seek reelection. A typology of candidates and retiring members was generated from the data. Nearly all candidates seeking reelection ("the ready warriors") had feelings of high efficacy and high trust. Half the retirees had feelings of low efficacy and low trust ("the bitter vanquished"). Other smaller subgroups were also identified among the candidates and retirees.

In this study we investigated the question of why school board members choose to seek or not seek reelection in terms of political efficacy and trust theory. A number of political theorists have identified a sense of efficacy and a sense of trust as key factors in determining the extent of an individual's participation in the political process.

Political efficacy is defined as a person's sense and feeling that "the government is responsive to a person's actions, and that when a person participates in politics, there is some noticeable effect" (Kopinak, 1980). Persons who have a sense of political efficacy have the feeling that they can make their voices heard, that they can be personally influential, and that their contributions will affect the political outcome.

Political trust is defined as a person's sense and feeling that "the government is generally helpful, beneficial, trustworthy and capable" (Simeon & Elkins, 1974). Persons who have a sense of political trust believe that government is capable of achieving

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the ends for which it has been established.

We attempted to clarify the relationships between individual school board members' feelings of efficacy and trust and their decision to seek or not seek reelection. For example, are board members who have feelings of high efficacy and high trust more likely to seek reelection than those members with feelings of low efficacy and low trust? In other words, are those board members who feel that they can be personally effective in influencing the outcome of board deliberations and who have a belief that school boards can be effective in achieving the ends for which they were established more likely to seek reelection than those board members who have a low sense of personal influence on board outcomes and who also feel that school boards are a relatively ineffective form of school government? Or are some other combinations of feelings of high and low efficacy and trust more likely to be related to the decision to seek reelection or not seek reelection?

Perspectives

There has been a considerable amount of study done in the United States and Canada on why individuals run for school board (Cistone, 1974; Jakes, 1982, 1983; McCarty, 1959) and also on what effect the school board experience has on the individuals who serve (Cistone, 1982; Jakes, 1984; Robinson & Stacey, 1984). There has also been a considerable amount of study done on incumbent defeat among school board members (Creswell & Mitchell, 1980; Davis, 1984; Lutz & Iannoccone, 1970). There has not been, however, extensive investigation of why school board members choose to seek or not seek reelection.

Similarly, there has been considerable study of individuals' feelings of efficacy and trust and their involvement in federal and state/provincial politics (Iyengar, 1980; Simeon & Elkins, 1974; Steinburger, 1981; Welch, 1975). In a major study of regional political cultures in Canada, Simeon and Elkins (1974) developed a typology of citizens as political actors based on citizens' individual feelings of efficacy and trust. The four citizen types in the typology are as follows:

The "supporters" have high feelings of efficacy and trust and come close to the conventional ideal of the trusting and active citizen. The "critics" do not really trust the government but have some confidence in their ability to affect it. These individuals have the potential to become active in politics. The "deferentials" trust the government but do not feel they have much ability to affect it. These citizens are content to have government look after their interests. The "disaffected" have neither faith in government nor a sense of being able to influence it. They are apathetic and disengaged from politics. In their national sample, Simeon and Elkins found the percentages in each of the citizen types to be supporters (24%), critics (30%), deferentials (10%), and disaffected (34%).

Only one study (Hanke, 1984) has examined the relationships between feelings of efficacy and trust and individuals' involvement in school board politics. The data for the study by Hanke were collected in the 1982 school board elections in eight southwestern Ontario school districts. What Hanke attempted to do in this study was to test the Simeon and Elkins typology of citizens as political actors at the school government level. Hanke examined the feelings of efficacy and trust among a sample of citizens and three groups of political actors in school board elections. The three groups of political actors were: (a) aspirant candidates, those seeking office for the first time; (b) incumbent candidates, those board members seeking reelection; and (c) retiring incumbents, those board members not seeking reelection. Hanke hypothesized that the sample of citizens would have lower feelings of political efficacy in

Citizen Type	Feeling of Efficacy	Feeling of Trust
Supporter	high	high
Critic	high	high
Deferential	low	high
Disaffected	low	low

relation to school board government than any of the three other political actor groups. Hanke suggested as well that incumbent candidates and retiring incumbents would have higher feelings of trust toward school board government than would aspirants and the sample of citizens. Finally, Hanke suggested that aspirant candidates would be “critics” and would have high feelings of efficacy and low feelings of trust. Incumbent candidates would be “supporters” and would have high feelings of efficacy and high feelings of trust. Retiring incumbents would be “deferentials”; they would have low feelings of efficacy and high feelings of trust.

As expected, Hanke found the sample of citizens to have lower feelings of efficacy toward school board government than any of the other three groups of political actors. In addition, it was shown that aspirants and the sample of citizens had lower feelings of trust toward school board government than did incumbent candidates and retiring incumbents. Contrary to expectations, it was found that aspirants had lower feelings of efficacy than incumbent candidates and retiring incumbents. Quite surprisingly, there was little difference in feelings of efficacy and trust between incumbent candidates and retiring incumbents. The results of the Hanke study suggest only partial support for the Simeon and Elkins typology as it applies to political actors and school government. The typology is supported to the extent that incumbent candidates are indeed “supporters”—they have high feelings of efficacy and trust. The typology is also supported by the results obtained from the sample of citizens who are largely “disaffected”—they have low feelings of efficacy and trust. The typology receives only partial support in terms of the results for “critics” and “deferentials.” Aspirants as “critics” should have high feelings of efficacy and low feelings of trust. The results show aspirants to indeed have low feelings of trust but only moderate feelings of efficacy. Retiring incumbents as “deferentials” should have low feelings of efficacy and high feelings of trust. The results show that retiring incumbents have moderately high feelings of efficacy and high feelings of trust. Indeed, there were only small differences between incumbent candidates and retiring incumbents in terms of their feelings of efficacy and trust.

Reviewing the results of the Hanke study, we felt that the results could have been influenced by political environment factors. The eight school board elections studied were nonpartisan contests and were relatively issue-free. A more partisan and conflictual set of electoral contests might produce quite a different research result. Larger differences in feelings of efficacy and trust among political actors just might well surface in school board elections that were richer in partisan flavor and divisive issues. With that thought in mind, this study in British Columbia was designed.

Data Source

School board elections in most British Columbia school districts have in recent years become increasingly partisan contests between supporters of the government (majority) party at the provincial (state) level of government and supporters of the opposition (minority) party at the provincial level (Neilsen & Robinson, 1980-81; Robinson & Hansen, 1981). The elections are usually issue-filled and conflictual.

In 1982 in British Columbia the government party (Social Credit Party) at the provincial level enacted legislation which eliminated the fiscal autonomy of local school boards. Prior to this time, school boards had the right to determine the amount of their annual school budget and set their tax rates to raise the needed amount. The 1982 legislation removed this right. Instead, the provincial government established the amount of each school district's budget. The purpose of the legislation was to place restraint on spending by school districts. The effect of the legislation was severe. Across the province, school programs were cut and a large number of teachers lost their jobs through layoffs. The legislation was bitterly attacked by the provincial opposition party (New Democratic Party). The conflict between the Social Credit Party and the New Democratic party at the provincial level was echoed at the school board level with conflicts between board members who were supporters of restraint versus board members who were opponents of restraint.

This study was done in 1984 just prior to school board election time in November. The subjects of the study were 60 incumbent school board members from 24 school districts in British Columbia. The sample of board members chosen had two strata: (a) candidates (i.e., board members seeking reelection); and (b) retirees (i.e., board members not seeking reelection). The 60 members were chosen in as balanced a manner as possible. Where one member was seeking reelection and one was not seeking reelection from the same school district, both became part of the sample. Urban, suburban, and rural districts were represented.

Methods

The study used structured interviews in which feelings of efficacy and trust were explored. In addition, information was sought concerning political socialization experiences, political recruitment experiences, board service experiences, and political ambitions to see if these factors had any effect on the decision of individual board members to seek or not seek reelection. All interviews were done by telephone. The interviews were taped and transcripts of the tapes were prepared.

Two judges with extensive knowledge of political behavior in education were given the transcripts for all 60 respondents. These judges were asked to categorize each board member's feeling of efficacy and trust as being either "high" or "low." There was agreement among the judges on all but one of the 60 board members. With this one case, no agreement existed so it was eliminated from the analysis.

Results

The Candidates

The results shown in Table 1 demonstrate clearly that the vast majority of the 29 candidates for reelection had feelings of both high efficacy and high trust. In fact, all of the 29 candidates had feelings of high efficacy.

All the candidates felt that they were capable of making their voices heard and that their contributions would be important in determining the course of political outcomes at the school government level. The way in which individual candidates expressed their feelings of efficacy differed. Some candidates felt that they were

TABLE 1
Candidates: Feelings of Efficacy and Trust
(n = 29)

Category	n
High Efficacy/High Trust	26
High Efficacy/Low Trust	3
Low Efficacy/High Trust	0
Low Efficacy/Low Trust	0

important as “opposition spokespersons.” They felt they were needed to coalesce public and school board opposition to the provincial government’s restraint program. One candidate put it this way:

I have been important as a catalyst in organizing opposition to policies of the provincial government and I have to continue to draw attention to the shortcomings of the current financing arrangements.

Candidates who supported the provincial government’s restraint program also felt it was important that they continue to serve as board members.

It’s necessary to maintain the restraint program until the economy starts to pick up. . . . This is a time when diplomacy is needed. . . . I feel the board needs leadership and I can give it.

Irrespective of their positions on the restraint issue, a number of the candidates felt that they had an important stake in certain board programs and that their contribution was necessary to see the programs through to fruition. For example, one candidate said:

We used to have a Neanderthal policy on drugs and alcohol. We’re developing a new policy in which I have been involved. I just got to see that through.

Two other candidates commented:

I had planned to go to university but there are exciting things happening in the district. We are restructuring the district and I enjoy the challenge.

The superintendent is going to retire in the coming year and I want to be involved in that one.

Some of the candidates stressed the importance of their contributions to providing continuity in board operations.

Well, two other board members decided to retire so if I went too that would mean three “greenhorns” on the board and that’s too many in this restraint period. I didn’t want to leave the board when things are so difficult.

I can’t be chairman anymore because our board has a policy of limiting the chairmanship to three years . . . so I want to help and give advice to the new chairman.

Several candidates indicated that they felt they had to stay on the board to prevent the board from being controlled by factions or individuals that they considered less than desirable. One candidate put it this way:

I thought I would only stay one term but then restraint became a problem. There is all this polarization. . . . I saw that the teachers were trying to load local school boards with their candidates. . . . I thought that if I stayed I could lend balance.

Another candidate said:

I think I represent a balance, a more moderate stance. Our board has a strong leaning in one direction.

My personal preference would have been to retire but for one very vocal trustee. He set himself up as education critic and commenced to try to destroy the system and "to get the administration." No other trustee could work with him. I've given 12 years of blood, sweat and tears. . . . I couldn't retire and let him have it.

One candidate felt that it was important that he continue so that a particular pressure group (Canadian Parents for French) would not have undue influence on board policies. He observed:

We have this strong pressure from some parents for French immersion programs without realizing the implications of these programs. . . . It's important that the system not be jeopardized by a pressure group.

Finally, some candidates felt they had to stand for reelection because they perceived themselves to be superior to other persons who were candidates. One candidate put it very bluntly and clearly:

I surveyed the field of candidates and thought of who might be elected and that's when I decided the school board needed me.

Another candidate noted:

The guy who decided to run against me was "medieval" . . . you know, that stuff about teachers should work harder and be paid less. I just had to run again.

All but three of the 29 candidates had feelings of high political trust. As indicated earlier, political trust is defined as a person's sense or feeling that "the government is generally helpful, beneficial and trustworthy" (Simeon & Elkins, 1974, p. 404) and that the government is capable of achieving the ends for which it was established. The 1982 provincial legislation which eliminated the fiscal autonomy of school boards in British Columbia and resulted in a substantial reduction of the authority of these boards might have been expected to produce a big loss in political trust as it applies to school board members. This did not occur among the candidates. The board members who were candidates for reelection felt that school boards could continue to be effective government units that were capable of achieving the ends for which they were established. This was true regardless of whether the candidates were for or against the provincial government restraint program. Candidates who were in favor of the restraint program said:

With the current financial situation in the province, we can't afford the dollars in all areas. I am reasonably in support of the restraint program. . . . I am not in favor of militant approaches toward the provincial government.

The Ministry of Education feels school boards have failed to face the financial facts. . . . I don't think there is that much restraint on me as a trustee. Trustees have a lot of control over their destinies.

Candidates who were opposed to the restraint program still felt that school boards were accomplishing their ends. This was being done in spite of provincially imposed obstacles.

We've lost our autonomy. . . . We've lost our taxing power but we're still seeing some positive action in the face of restraint. We put in Project Read, French immersion and a gifted program.

The government's current stance to gain centralized control over education is retrograde . . . but I visit schools and I see good things, some due to the atmosphere engendered by the board . . . good things are happening, teachers are innovating and parents are coping in spite of everything.

We have lost our local taxing power. We have lost our local accountability. The function of the school board was designed for local control. Still we can encourage teachers . . . it is immediately reflected in classrooms.

Sometimes we have ideas we'd like to put in, but instead of expanding we are cutting back . . . it's very depressing. Still, I see what is happening in the elementary schools. We pay visits to the schools and see students really achieving. . . . Also in the high schools, the arts groups put on displays, the band or drama. . . . I see great things happening in our schools.

There were three candidates with feelings of low political trust. They did not feel that school boards were capable of achieving the ends for which they were established. Still they chose to run for what appear to be reasons of personal gratification. One candidate put it this way:

We have no local decision making . . . trustees are forced to be hatchet men or good guys at the whim of the Minister of Education. Still, I enjoy it, I think I do a credible job, I have no axe to grind and people listen to me.

The Retirees

The results shown in Table 2 indicate that exactly half the 30 retirees had low feelings of efficacy and low feelings of trust. Among this group of trustees with low efficacy and low trust, the feelings of low efficacy tended to be general and not specific. Typical of the comments were the following:

I just don't have the energy level to fight for things I think should be fought for. Someone younger with more energy will have to do it.

I began to become defensive about the decisions that were being made.

Many of the comments indicative of low efficacy related to the increased feeling of powerlessness experienced by board members as a result of the provincial government's restraint legislation. It should be pointed out, however, that retirees who supported the restraint program also had feelings of low efficacy deriving from other sources. One retiree observed:

I am frustrated with the Public Schools Act. Even with restraint and cutbacks in teachers, we can't remove the incompetent people from the system.

Another retiree explained his frustration this way:

I tried to educate others to my point of view but I have failed to alter the essential priorities of the system. . . . I've failed to point out to teachers that the views of the public are as important as their views . . . I am too discouraged and depressed . . . at my lack of progress. There's too much party politics on the board.

The feelings of low political trust were generally very pronounced among the group of retirees who expressed feelings of low efficacy. These retiring board members felt that school boards were no longer capable of achieving the ends for which they were established. Some of the comments made by these retirees were:

School boards are recipients of education policy handed out by the Ministry . . . boards are just puppets now. . . . Public opinion polls carry more weight with the Minister than does the opinion of trustees.

We have completely lost our autonomy . . . we could do without trustees right now. It's all very frustrating. We feel we're supposed to protect the instruction of children, then that is penalized by having our budget cut.

As board members we are not being able to effect the changes that the public would like. We work within the guidelines and the board makes a decision which may be overturned by the Minister of Education. Actually, the public has more power than school boards . . . because public lobbying of the Minister works. He'll listen more to the public than he will to us.

TABLE 2
Retirees: Feelings of Efficacy and Trust
(n = 30)

Category	n
High Efficacy/High Trust	9
High Efficacy/Low Trust	2
Low Efficacy/High Trust	4
Low Efficacy/Low Trust	15

Within the group of 30 retirees there were nine who had feelings of high efficacy and high trust. In this regard, these retirees resembled the vast majority of the candidates with their feelings of high efficacy and high trust. In what way was this group of retirees different from the larger group of retirees with their feelings of low efficacy and low trust? Essentially, these board members had had positive experiences during their term of office, but were ready to move on to other challenges. In some cases, the board members were going to run for higher political office. In other cases, they were going to make a career change. These board members did believe, however, that school boards were important and were capable of meeting the challenges they faced. One of these retirees expressed himself as follows:

The present financial legislation makes things hard, but I have seen positive changes coming about for children. We've provided options for children who would have dropped out. . . . We've kept schools open that were planned for closure. . . . I just became more and more interested in civic issues . . . the larger perspective . . . besides there were others from our slate who were electable and it seemed a good time for me to make a move.

A small group of the retirees (4 of the 30) had feelings of low efficacy and high trust. This group consisted of older trustees who felt they were no longer effective but were still firmly committed to the worth of school board government. A final group of the retirees (2 of the 30) had feelings of high efficacy and low trust. This small group felt that they could be politically efficacious on the school board but at the present time school boards were pretty impotent instruments of government. They simply felt that they could spend their time more profitably elsewhere.

*Candidates and Retirees: Differences in Political Socialization,
Political Recruitment, Political Ambition and Board Experiences*

Information was sought from both the candidates and retirees about their political socialization experiences, their recruitment into school board politics, their political ambitions, and their experiences as school board members. This information was analyzed to determine whether any of these factors bore any relationship to the decision to seek or not seek reelection.

The interview data revealed the candidates and retirees to be remarkably alike in terms of their political socialization, political recruitment, and political ambitions. In terms of political socialization, a majority of both the candidates and the retirees had had a long time interest in politics. One candidate remarked:

I've always been interested in politics, especially when I went to university.

One of the retirees said:

About 1930 I became interested in national and local politics. I started in a political party early on.

For 10 of the 29 candidates and 13 of the 30 retirees, political activity was part of their family life as children. One candidate noted:

Dad was involved in various political movements—anti-war, anti-nuclear power plants. Mom was involved in the Women for Peace movement in the States.

A remarkably large percentage of both the candidates and retirees held political party memberships. In British Columbia, Mishler (1979) reports that 7% of citizens are members of political parties. In this group of school board members, 63.3% of the candidates and 44.8% of the retirees said they were members of a political party.

In terms of political recruitment, the experiences of the candidates and retirees were similar. Most became involved because they had issue differences with incumbents or they had an issue which they wished to promote. Most said their first-time candidacies were self-initiated.

A majority of both the candidates and retirees had no political ambitions beyond the school board level. Only six of the 29 candidates and nine of the 30 retirees had political ambitions at the city council, provincial, or federal level.

The big difference between the candidates and the retirees lay in the way in which they perceived their school board experiences. The candidates saw themselves as efficacious board members and they tended to take personal credit for many of the board's achievements. The retirees, on the other hand, were more inclined to attribute any board achievement to the board as a whole.

Both the candidates and retirees expressed disappointment as well as satisfaction about their board experiences. For example, individuals in both groups talked about the difficulties they had experienced with the provincial restraint program. The retirees felt personally frustrated with their inability to deal with this and expressed a loss of faith in the system. The candidates, on the other hand, expressed a willingness to grapple with the problems and to get on with the business of governing a school system.

In terms of school board service, the candidates had an average of 4.23 years of service. The retirees had an average of 7.03 years of service.

Conclusions and Implications

The findings of this study attempted to clarify the relationship between individual school board members' decisions to seek or not seek reelection and their feelings of political efficacy and political trust. Research to date in a number of political arenas has suggested a strong relationship between active political participation and feelings of high political efficacy and high political trust (Burke, Clarke, & LeDuc, 1978; Hanke, 1984; Iyengar, 1980; Simeon & Elkins, 1974; Sinclair, 1979; Steinburger, 1981). What these studies have shown is that persons who feel politically efficacious and who trust the ability of the government to achieve the ends for which it was established have a greater tendency to become involved in the political process than those individuals who do not feel politically efficacious and who do not have trust in the ability of government to achieve its ends.

The findings of this study support to a considerable extent the findings of other studies which show the relationship between active political participation and high political efficacy and trust. The findings of this study showed that 26 of 29 candidates had feelings of high efficacy and high trust whereas only nine of the retirees had feelings of high efficacy and trust. The findings also showed that 15 of the retirees had feelings of low efficacy and low trust whereas none of the candidates had feelings of

low efficacy and trust. In general, then, high efficacy and high trust were associated with active political participation (standing for reelection). Low efficacy and low trust were associated with no political participation (not standing for reelection).

Not all candidates had, however, feelings of high efficacy and high trust. A small group (3 of 29) had feelings of high efficacy and low trust. Similarly, not all retirees had feelings of low efficacy and low trust. In fact, only 15 of the 30 retirees experienced low efficacy and low trust. A sizable number (9 of 30) had feelings of high efficacy and high trust. Two other small groups of retirees had feelings of low efficacy and high trust (4 of 30), and feelings of high efficacy and low trust (2 of 30).

The findings of this study suggest that school board members at reelection time do not fit easily into established typologies of political actors. For example, the Simeon and Elkins typology of citizens as political actors is not too useful to typologize school board incumbents at reelection time. Candidates and retirees do not in most cases fit easily into the categories of supporter, critic, deferential, and disaffected. Similarly, the situation of incumbents has to be seen as somewhat different from the situation of aspirant candidates at election time. Unlike the aspirants, the candidates have had tempering experience of service in political office.

The findings from this study would seem to suggest that six groups of school board incumbents emerge at school board reelection time. Two groups emerge among the candidates, and four groups emerge among the retirees.

The two groups which form the candidate group might be typologized as follows:

Ready warriors. These are the incumbent board members who have feelings of high efficacy and high trust and who are offering themselves as candidates for reelection. They see themselves as personally efficacious and they see school boards as important and potentially effective means of school government. These incumbents are the primary source of candidates for reelection.

Glory seekers. These are the incumbent board members who have feelings of high efficacy and low trust but who, nevertheless, offer themselves for reelection. They do not see school boards as particularly effective instruments of school government but choose to run for office as a means of self-gratification and self-aggrandizement. They enjoy the attention and status that political office brings. These incumbents are a smaller secondary source of candidates for reelection.

The four types which emerge among the retiree group might be called:

Bitter vanquished. These are the incumbent board members who have feelings of low efficacy and low trust and who choose not to seek reelection. They see themselves as no longer efficacious and they see school boards as impotent instruments of school government. These incumbents form the largest block of retirees.

Political mercenaries. These are incumbent board members with feelings of high efficacy who are not seeking reelection. In some cases, these members have feelings of high trust; in other cases, they have feelings of low trust. The important distinguishing characteristic of this group is the political ambitions of its members. Whether the members of this type feel that school boards are effective or ineffective instruments of school government is less important than the fact that the members felt that they had been efficacious as board members and that they were ready to seek out new political challenges in the arenas of civic, provincial, or federal politics.

Political deserters. These are incumbent board members with feelings of high efficacy who are not seeking reelection but who are not politically ambitious. They see themselves as having been efficacious as board members. They may or may not have felt that school boards were effective instruments of school government. What is important is that these members feel that they are ready to move on to new challenges in

areas outside the political arena. They have decided that political life at the school board level or any other level is not for them.

Exhausted deferentials. This is a small group of incumbents who have feelings of low efficacy and high trust. They perceive themselves as no longer efficacious but have faith in school boards as instruments of government. These incumbents (who are usually older) form a smaller part of the retiree group.

Service on a school board can be a heady political experience. This is likely to be true if the individuals who enter the service have had a long and abiding interest in politics. It is particularly true if the election leading up to the service is a partisan contest with sharp issue differences between the candidates. It is also true if the issues which divided the candidates at election time continue to divide the successful candidates when they become board members.

The overall effect of school board service in partisan, conflictual situations is one of politicizing the incumbents (Robinson & Stacey, 1984). In effect, the board members become "political gladiators" (Mishler, 1979). Some, like the "ready warriors," enjoy and value political life at the school board level and feel compelled to continue to serve. A few, such as the "glory seekers" serve for reasons of self-aggrandizement. Other board members leave the wars of school board politics. Some, like the "political mercenaries," choose to fight in new fields of politics at the civic, provincial, or federal level. Others, like the "political deserters," decide that the political life is not for them and decide to focus their energies elsewhere. Still others, like the "exhausted deferentials," become tired and leave the task of school government to fresher and more energetic persons. And still others, like the "bitter vanquished," leave the battlefield of school politics as defeated and disillusioned persons.

References

- Burke, M., Clarke, H.D., & LeDuc, L. (1978). Federal and provincial political participation in Canada: Some methodological and substantive considerations. *Canadian Review of Sociology and Anthropology*, 15(1).
- Cistone, P.J. (1974). School board member recruitment: The case of Ontario. *Journal of Educational Administration*, 9(2), 43-56.
- Cistone, P.J. (1982). Political attitudes of elected and defeated school board candidates. *Politics of Education Bulletin*, 10.
- Creswell, L.W., & Mitchell, D.E. (1980). Episodic instability in school district elections. *Urban Education*, 15(2), 189-213.
- Davis, R. (1984). Policy changes in local schools: The dissatisfaction theory of democracy. *Urban Education*, 19(2), 125-144.
- Hanke, M. (1984). *Political efficacy and trust: Their relevance to the recruitment and socialization of school board members in southwestern Ontario*. Unpublished doctoral dissertation, University of Toronto.
- Iyengar, S. (1980). Subjective political efficacy as a measure of diffuse support. *Public Opinion Quarterly*, 4(2), 249-256.
- Jakes, H.E. (1982, September/October). A profile of elected school trustees in Ontario. *Ontario Education*, 22-26.
- Jakes, H.E. (1983, March-April). Why did they run? *Ontario Education*, 18-23.
- Jakes, H.E. (1984, May-June). How successful was their first year as new school board members? *Ontario Education*, 3-7.

- Kopinak, K.M. (1980). Polity. In R. Hegedorn (Ed.), *Sociology* (pp. 417-448). Toronto: Holt, Rinehart and Winston.
- Lutz, F., & Iannoccone, L. (1970). *Politics, power and policy: The governing of local school districts*. Columbus, OH: Merrill.
- Lutz, F., & Iannoccone, L. (1978). *Public participation in local school districts: The dissatisfaction theory of democracy*. Lexington, MA: Heath.
- McCarty, D.J. (1959). School board membership: Why do citizens serve? *Administrator's Notebook*, 8(1).
- Mishler, W. (1979). *Political participation in Canada*. Toronto: Macmillan.
- Neilsen, V., & Robinson, N. (1980-81). Partisan school board elections: New evidence to support the case for them. *Administrator's Notebook*, 29(3).
- Robinson, N., & Hansen, S. (1981, June). *Is there a place for party politics in school board elections?* Paper presented at the Annual Meeting of the Canadian Association for the Study of Educational Administration, Halifax, Nova Scotia.
- Robinson, N., & Stacey, C. (1984). Serving on the school board: A political apprenticeship for higher office. *Alberta Journal of Educational Research*, 30(2), 115-125.
- Simeon, R., & Elkins, D.J. (1974). Regional political cultures in Canada. *Canadian Journal of Political Science*, 7(3), 397-437.
- Sinclair, P.R. (1979). Political powerlessness and sociodemographic status in Canada. *Canadian Review of Sociology and Anthropology*, 16(2).
- Steinburger, P.J. (1981). Social context and political efficacy. *Sociology and Social Research*, 65(2), 129-141.
- Welch, S. (1975). Dimensions of political participation in a Canadian sample. *Canadian Journal of Political Science*, 8(4), 553-559.

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Teachers' Motivations for Participating in Curriculum Development Committees

The purpose of this study was to answer two research questions: (1) What variables influence teachers' willingness to participate in curriculum development committees? (2) In what ways do these variables make a difference to teachers? Six categories of variables were drawn from the literature. Brief statements (called indicators) were written to reflect the meaning implied by each category. Twenty-three elementary school teachers were asked to do a card-sort showing the relative importance of each indicator, and to answer specific questions about their rankings of the indicators. The data show that teachers are most attracted to participation in curriculum development committees by the prospect of professional development and participation in decision making. Of secondary importance were the categories of self-esteem and organizational climate. Career orientation and extrinsic rewards were least valued by the teachers. The findings of the study have implications for the organization of curriculum development committees and for the kinds of work which the committees perform.

Increasing attention has been given to classroom teachers as curriculum developers outside their own classrooms, for there is considerable evidence that teacher participation in curriculum development benefits the development process.

First, research shows that teachers bring specialized knowledge to the curriculum development process. Because teachers spend most of their time working directly with students, they offer firsthand knowledge about schools, students, and the classroom situation (Ben-Peretz, 1980; Broome, 1980; Connelly, 1972; Connelly & Ben-Peretz, 1980; Doll, 1974; Oliver, 1970). According to Verduin (1962), teachers are more familiar than external experts with individual differences in children and their individual needs, while Zisenwine (1982) pointed out the teacher's ability to structure the curriculum according to local needs and interests. There is also evidence that teachers

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have the ability to create practical materials for classroom use. Ben-Peretz and Tamir (1982) claim that teachers are extremely concerned with usability because they implement curricula. Therefore, when curricula are developed by teachers, consideration is given to the development of materials which other teachers can use without difficulty.

Second, curricula are more likely to be implemented effectively when teachers are involved in their development, thus narrowing the gap between theory and practice (Carlin, Purchall, & Robinson, 1976). Oliver (1970) writes that the more teachers are involved in the development process, the more readily they accept new ideas. There is also evidence that teachers develop commitment to the curricula they have helped to produce (Carlin, Purchall, & Robinson, 1976; Doll, 1974; Kemp, cited by Walton & Morgan, 1978; Oliver, 1970).

However, although research indicates that it is desirable for teachers to participate in curriculum development outside of their own classrooms, few studies have explored teachers' motivations for becoming involved. In order to identify variables which may be related to teachers' willingness to participate in curriculum development, a review was conducted of literature pertaining to participation in decision making. Three contexts were studied: organizations in general, schools in particular, and curriculum development committees.

The variables identified through the literature search were grouped by the researcher into six categories: self-esteem, career orientation, organizational climate, professional development, participation in decision making, and extrinsic rewards. A brief summary of each category appears below.

Many researchers have written about self-esteem and the factors which influence whether a person has high or low self-esteem (Alutto & Belasco, 1972; Forsyth & Hoy, 1978; Hoy & Miskel, 1978; Wickstrom, 1973). According to these researchers, self-esteem is based on such factors as a feeling of competence, respect from others, and association with people in positions of authority. Other researchers, studying curriculum development in particular, have found that participation in curriculum development can enhance teachers' self-esteem (Carswell, 1977; Keith, Blake, & Tiedt, 1968; Miller & Dhand, 1973; Young, 1985). Teachers in these studies claimed that their self-esteem increased when their knowledge grew, when their contributions were accepted by other committee members, and when they were asked to participate and were paid for their work.

Career orientation refers to employees' commitment to their work for the purpose of advancing to another position or for improving their current positions. Career-related factors such as status, recognition from superiors, the possibility of becoming more influential in curriculum development, promotion, and job security are of concern to many teachers (Holdaway, 1978; Hoy & Miskel, 1978; Johansen, 1967; Leithwood, 1982; Morrison, Osborne, & McDonald, 1977; Walton & Morgan, 1978; Wickstrom, 1973). Since opportunities for promotion within teaching are rare (Leithwood, 1982) and the reward system does not differentiate among individuals who are operating at the same hierarchical level (Young, 1985), teachers may welcome career-related incentives for participating in curriculum development (Soliman, cited by Walton & Morgan, 1978).

Organizational climate refers to the relationships among people working at the same level as well as at different levels of an organizational hierarchy. An open climate is characterized by such factors as good interpersonal relations, group cohesiveness, teamwork among staff members, a non-threatening atmosphere, and cooperation and support from superiors (Grassie & Carss, 1972; Holdaway, 1978; Hoy & Miskel, 1978; Leithwood, 1982; Miskel, Fevurly, & Stuart, 1979; Walton & Morgan, 1978;

Wickstrom, 1973). Hoy and Miskel (1978) concluded from their research that the more open or healthy the climate of one's workplace, the greater the degree of job satisfaction. It is possible, then, that, if the climate of a school district is open, teachers will be more satisfied with their work and may, therefore, be more willing to participate in curriculum development.

Professional development refers to increased understanding and expertise related to a person's work. Teachers have acknowledged a feeling of professional growth when they participated in curriculum development committees (Miller & Dhand, 1973; Young, 1985). Many of the teachers in these studies claimed that participation was stimulating, that they learned a great deal, and that they felt rejuvenated about teaching. They felt that such professional development had a positive effect upon their teaching.

Participation in decision making refers to employees' desire to have input into decisions which affect their work. Teachers differ in the extent to which they wish to participate, and they are influenced by such factors as the task to be performed and the level of schooling at which they work (Chung, 1985). However, Young (1985) reported that participation in work-related decisions is of primary concern to many teachers. There is also evidence that teacher participation in decision making increases job satisfaction (Alutto & Belasco, 1972; Holdaway, 1978; Hoy & Miskel, 1978). The explanation may be that, when teachers participate in decisions which are directly related to their work, they feel they have a stake in the proposed solutions (Hoy & Miskel, 1978) and acquire a sense of responsibility for the decisions that are made (Grassie & Carss, 1972; Miskel, 1972; Walton & Morgan, 1978; Wickstrom, 1973; Young, 1984). However, Conway (1984) warns that the evidence supporting the positive results of participation in decision making is not yet conclusive.

Extrinsic rewards refers to the desire of employees to receive tangible acknowledgment for the work that they do. Lortie (1975) found from his research that teachers rarely receive overt honors for their achievements. As Young (1985) pointed out, the reward system in most school districts is based on teachers moving out of the classroom into higher levels of the organizational hierarchy rather than receiving rewards for their work as teachers. Teachers are not necessarily pleased with this state of affairs. Hoy and Miskel (1978), for example, found that teachers want the salary reward to be contingent upon performance.

The literature suggests, then, that there are six categories of variables which may attract teachers to participation in curriculum development outside of their own classrooms. However, the categories which are most important to teachers have not been identified; nor do we know why certain categories may be more motivating than others. Therefore, the purpose of this study was to answer the following two research questions.

1. What variables influence teachers' willingness to participate in curriculum development committees?
2. In what ways do these variables make a difference to teachers?

Method

Development of the Measuring Instrument

The measuring instrument was a card-sort which was developed in three stages. First, six categories of variables which may motivate teachers to participate in decision making were derived from the literature. They were self-esteem, career orientation, organizational climate, professional development, participation in decision making and extrinsic rewards.

Second, in order to apply the categories to curriculum development committees in particular, the researcher wrote statements (called indicators) related to each category. For example, an indicator of the category of Career Orientation was *Your work on the curriculum committee has enabled you to move into a more desirable teaching position*. Four indicators were written for each category and typed on separate cards. Each indicator was designed to touch upon a particular aspect of the category. For example, the indicator given above suggested the possibility of a new and better teaching position, while another indicator offered the possibility of a principalship or a consultant's position.

Third, five elementary school teachers were asked to sort a random sequence of the 24 indicator cards into the six categories. This was done to determine in what ways, if any, their interpretation of both the categories and the indicators differed from that of the researcher. Revisions were made on the cards which more than one teacher found difficult to categorize. (The indicators appear in Tables 2-7.)

Pilot Study

Prior to data collection, a pilot study was conducted with a different group of five elementary school teachers to give the researcher experience in conducting the research procedure and to determine the amount of time which the procedure would require.

Sample

A major consideration in selecting a sample was to locate teachers from a variety of school districts so that the data would not be influenced by the curriculum development policies and procedures of one particular district. Since it was not feasible to travel throughout the province, the researcher contacted teachers who were currently enrolled as graduate students at the University of Alberta. Contacts were made through required courses in the Faculty of Education. Twenty-seven teachers identified themselves as having taught in an elementary school classroom within the last two years. Twenty-three (85%) of those teachers agreed to participate in the study.

It is possible that graduate students may be different from other teachers because they have chosen to continue their university studies. However, the researcher did not find any evidence in the literature supporting this point, and in any case it seemed that broad geographic representation would best serve the purposes of this study.

The sampling procedure did result in broad geographic representation, for the teachers were drawn from 14 school districts. Twelve of the districts were located in Alberta, one in Ontario, and one in New Brunswick. The subjects' teaching experience ranged from 3 to 20 years, with an average of 9 years. Six (26%) of the teachers had participated at some time on a curriculum development committee.

Data Collection

Each teacher met with the researcher for a private interview. The teacher was told that the purpose of the study was to find out what motivates teachers to participate in curriculum development committees.

The teacher was given the 24 randomly sequenced cards of indicators and asked to place each card in one of the following categories: Most Important, Important, Somewhat Important, and Not Important. The reason for using a four-point scale was to eliminate the possibility of having the majority of the cards placed in a middle category.

When the card-sort had been completed, the teacher was interviewed regarding the placement of the cards. The interview was tape recorded and later transcribed.

Particular attention was given to the Most Important category because the purpose of the study was to determine which variables motivate teachers to participate in curriculum development and why those variables are important to teachers.

The teacher was asked to explain why the cards in that category were particularly important to him or her. The interview then continued with three follow-up questions: "These are the things you would like to achieve from working on a curriculum development committee. Do you think you would achieve them?" "Would you rather achieve these things through some other means?" "Is there anything else that is very important to you that is not included in these cards?"

The teacher was also asked to explain why certain cards had been placed in the Not Important category. It was thought that the responses could shed light on variables which were less likely to influence teachers' willingness to participate in curriculum development committees.

Inconsistencies in the placement of cards were also probed. An example would be the placement of three of the four indicators of self-esteem in the Most Important category and one indicator of self-esteem in the Somewhat Important category.

Data Analysis

The researcher charted the frequency with which each card was placed in each of the categories: Most Important, Important, Somewhat Important, and Not Important. This procedure was used for each of the six categories of variables. As a result, it was possible to identify the relative importance which the teachers attached to the six categories and the relative importance given to each indicator of a category.

The taped interviews were used to identify the reasons which the teachers gave for their placement of cards in the Most Important and Not Important categories. The reasons were listed for each category, and the frequency with which teachers gave those reasons was totaled.

Findings

Relative Importance of the Six Categories

Table 1 summarizes the relative importance the teachers gave to each of the six categories of variables which may attract teachers to participation in curriculum development.

As shown in the table, the teachers were most attracted to the categories of Professional Development and Participation in Decision Making. According to the interviews, the teachers valued Professional Development because they were interested in learning more about all aspects of their work. They felt that, by acquiring more knowledge, they would inevitably become better teachers. Also, new curricular ideas would stimulate their interest in teaching.

The teachers were attracted to the category of Participation in Decision Making primarily because it offered the opportunity to express their opinions and to have more input into decisions which affect their work. The teachers' attraction to this category may be explained by the fact that they are at the bottom of the educational hierarchy and, therefore, do not often have the opportunity to influence the curriculum decisions which are made. In addition, many of the teachers felt that participation in decision making leads to increased job satisfaction which results in more effective teaching.

The teachers placed equal value on the categories of Self-Esteem and Organizational Climate. Some of the teachers were very attracted to the category of Self-Esteem while others did not give it much importance. The teachers who were

TABLE 1
Relative Importance of the Six Categories
of Reward for Participation
in Curriculum Development Committees

Category		Most Important	Important	Somewhat Important	Not Important
A.	Professional Development	50	29	12	2
B.	Participation in Decision Making	41	33	16	2
C.	Self-Esteem	13	39	28	12
D.	Organizational Climate	13	39	28	12
E.	Career Orientation	12	25	27	27
F.	Extrinsic Rewards	1	6	24	61

attracted to this category felt that receiving recognition from others was important. Comments made by the teachers suggest that, while some teachers have a greater need to increase their self-esteem, others feel that their self-esteem needs are currently being satisfied.

The teachers were attracted to the category of Organizational Climate primarily because it is important to them to work in a nonthreatening atmosphere; that is, one in which they can trust the people with whom they work. The teachers also indicated that it is important to feel relaxed and at ease with their colleagues and to know that they have support from their immediate supervisors.

The category of Extrinsic Rewards was least valued by the teachers primarily because they did not feel that it is necessary to be compensated for serving on a curriculum development committee. The teachers felt that participation in curriculum development is something which teachers become involved in because of a sense of professional commitment to the teaching profession rather than because of possible extrinsic rewards.

At this point it appears that certain categories of variables are more likely than others to encourage teachers to participate in curriculum development committees. However, it is also possible that certain aspects of each category are more attractive than others. This information was obtained by studying the indicators written for each category. The totals of the most important and important columns in each table were used to determine the relative importance of the indicators.

Relative Importance of the Indicators of Professional Development

As shown in Table 2, all four indicators of Professional Development were important to the teachers in this study.

The teachers were most attracted by the indicator *You are increasing your knowledge about subject matter, teaching and education because of working on the curriculum committee*. As one teacher pointed out, "The more knowledge you have about subject matter and how that is going to be taught can do nothing but improve our teaching and enhance the outcomes of our students." Said two other teachers, "There is just no end to knowing everything there is to know about a subject area" and "Getting into curriculum work makes my understanding of the curriculum and the resources available better." It was also important to teachers to understand the

TABLE 2
Relative Importance of the Indicators
of Professional Development

Category A: Professional Development	Most Important	Important	Somewhat Important	Not Important
1. You are increasing your knowledge about subject matter, teaching, and education because of working on the curriculum committee.	19	4	0	0
2. Working on the curriculum committee makes you feel rejuvenated about teaching and anxious to try out the ideas you gained with your students.	12	7	2	2
3. Interaction at meetings allows committee members to discuss and challenge each others' ideas.	8	11	4	0
4. Working on the curriculum committee is enabling you to make a contribution to the teaching profession outside the classroom.	11	7	5	0
Totals	50	29	11	2

rationale underlying a curriculum. One teacher said, for example, “I would hope by working on a curriculum committee that somehow one would gather more of the big picture. You’d see more of the larger plan of the curriculum, its justifications, the problems of making and putting it into practice.”

As shown in Table 2, a number of teachers valued the possibility that *Working on the curriculum committee makes you feel rejuvenated about teaching and anxious to try out the ideas you gained with your students*. Rejuvenation was important to these teachers because they felt that it enhances the work they do in the classroom. As one of the teachers said, “You always need a shot in the arm when you are teaching to keep your motivation and still feel excited about teaching. It gives you that and that’s a plus!”

Many teachers also valued the indicator *Interaction at committee meetings allows committee members to discuss and challenge each others’ ideas*. These teachers wanted to acquire professional growth from interaction with other professionals in their field. Comments made by these teachers included, “From interacting with other interested, knowledgeable professionals, you learn a lot,” and “You will become more knowledgeable because you are sharing ideas with other people and I think that knowledge will help you become a better teacher.” One teacher felt that curricular problems can be resolved as a result of interaction with other professionals. This particular teacher said, “My ideas get other people going and their ideas get me going and a lot of neat things come out and it leads to other ways of handling a curricular problem or subject differently than in the past.”

As revealed in Table 2, many teachers felt that teaching involved more than their individual classrooms. These teachers were attracted by the indicator *Working on a curriculum committee is enabling you to make a contribution to the teaching profession outside of the classroom*. These teachers considered curriculum development to be part of their responsibility as teachers. One teacher said, for example, "The classroom isn't the only part of the teaching profession. It's not the only reason a teacher is in the job. Teaching is everything you do within the context of teaching."

Relative Importance of the Indicators of Participation in Decision Making

As illustrated in Table 3, the teachers were most attracted by their perception that *Working on the curriculum committee gives you the opportunity to voice your opinions about the curricula used in classrooms*. These teachers seemed to feel that, because they spend the majority of their time in classrooms working with students, they know what works best in classrooms. Therefore, they have practical expertise to offer the curriculum development process. One teacher said, for example, "It's really important when you write curriculum to have teachers who are in classrooms because I find that often I'm given things to teach that people are writing here at the University who haven't been in the classroom for 20 years and it isn't practical at all! I think if you're a teacher and you're doing the teaching, you know what works for a variety of students." Said another teacher, "I have very strong feelings about some of the curricula we are currently using and some of it is trash that is being mandated that we teach. It's not so much the theory behind the curriculum that I object to, it's the content that I object to. It's dull, boring, flat, not interesting to me to teach! So, how can I make it interesting to the kids?"

The teachers were also very attracted by the idea that *Working on the curriculum committee gives you the opportunity to decide on the curricular materials to be used in your school*. The teachers indicated that they wanted to be more involved in decisions which directly affect their work and that they experience frustration when they have no control over the curriculum decisions which are made. As one teacher said, "Often we are given curricular materials without having had the opportunity to voice our opinions or to give any kind of input as to whether that particular curriculum would fit our particular situation with our particular students."

Equally attractive was the possibility that *Working on the curriculum committee gives you the opportunity to decide how a subject should be taught*. Once again, the teachers felt that, because they teach the subjects of the curriculum, they should be involved in determining the strategies for teaching those subjects. Said one teacher, "There is some controversy over how subjects should be taught and I'd like to have my say, an opportunity to express myself and say what I think!"

Fewer teachers were attracted to the idea that *By working on the curriculum committee, you can satisfy your curiosity about how curriculum decisions are made*. This suggests that the teachers are more concerned with having the opportunity to voice their opinions than with learning how the decision making process is effected.

Relative Importance of the Indicators of Self-Esteem

As indicated in Table 4, the teachers thought they would derive feelings of self-esteem primarily if *You have been chosen for curriculum committee work because of your expertise in different areas*. Typical comments included, "It would make me feel good to know that others thought I had expertise to offer" and "It would make me feel good to be recognized for being good at something."

TABLE 3
Relative Importance of the Indicators
of Participation in Decision Making

Category B: Participation in Decision Making		Most Important	Important	Somewhat Important	Not Important
1.	Working on the curriculum committee gives you the opportunity to voice your opinions about the curricula used in classrooms.	12	10	1	0
2.	Working on the curriculum committee gives you the opportunity to decide on the curricular materials to be used in your school.	12	7	3	1
3.	Working on the curriculum committee gives you the opportunity to decide how a subject should be taught.	12	7	3	1
4.	By working on the curriculum committee you can satisfy your curiosity about how curriculum decisions are made.	5	9	9	0
Totals		41	33	16	2

It is worth noting that teachers are usually chosen for curriculum committees by people in positions of authority such as their principals and administrators from central office. Therefore, the importance of this indicator suggests that it is the *source* of recognition that makes a difference to teachers. This inference is supported by the fact that the other three indicators of self-esteem involved recognition by other teachers. Compliments from colleagues were apparently not valued as highly as recognition by superiors in the educational hierarchy.

Relative Importance of the Indicators of Organizational Climate

Table 5 shows that the indicator *You feel comfortable sharing the work of the committee with the teachers in your school* was most important to the teachers. As one teacher said, “I like to feel that I can share my ideas and interact with the teachers I am working with.”

Many teachers also felt strongly about receiving support from central office and their school administrators. These teachers valued the indicators of *Central office encourages the committee to pursue their work in the way they think best* and *You feel that your principal is supporting the work of your committee*. According to these teachers, administrative support is essential in order for a project to be successful. As one teacher remarked, “If you don’t have support from head office you’re done for because they wouldn’t let you go out and experiment with new ideas and go to conferences and all sorts of things and they wouldn’t support the activities in your school

TABLE 4
Relative Importance of the Indicators
of Self-Esteem

Category C: Self-esteem		Most Important	Important	Somewhat Important	Not Important
1.	You have been chosen for committee work because of your expertise in different areas.	7	10	6	0
2.	Other classroom teachers have high regard for the curricula you helped develop.	4	8	6	5
3.	You are perceived by the teachers in your school as being very resourceful and they go to you when they require assistance with curricula.	1	10	8	4
4.	Other people on the committee think you have good ideas and they display interest when you speak.	1	11	8	3
Totals		13	39	28	12

that are happening as a result of the committee. So, you wouldn't get very far!" It is worth noting that the majority of the teachers who valued these two indicators had participated in curriculum development committees. Perhaps support from central office and school administrators becomes more important to teachers after they have been involved in a curriculum development project.

A number of teachers did not feel that the indicator *You enjoy going to committee meetings because you are among people who are pleasant and easy to work with* was important. None of those teachers had participated in a curriculum development committee. By contrast, all of the teachers who had done so felt that this reward was important. Perhaps, after having worked on a curriculum development committee, teachers recognize that it does make a difference if committee members are congenial.

Relative Importance of the Indicators of Career Orientation

As noted in Table 6, the teachers valued most highly the indicator *As your name becomes known for the committee work you have done, you may have the opportunity to do more curriculum work in an area of your choice*. When these teachers were asked why they thought this indicator was important, their responses indicated that they equate career advancement with knowing the right people. One teacher commented, for example, "It's important for people to know who you are if you want to advance within the ladder." Said another teacher, "If you want to get ahead, it's important to know the right people and it also helps to know how the system works—who supports who and who doesn't."

TABLE 5
Relative Importance of the Indicators
of Organizational Climate

Category D: Organizational Climate	Most Important	Important	Somewhat Important	Not Important
1. You feel comfortable sharing the work of the committee with the teachers in your school.	3	14	4	2
2. Central office encourages the committee to pursue their work in the way they think best.	4	10	7	2
3. You feel that your principal is supporting the work of your committee.	5	8	5	5
4. You enjoy going to committee meetings because you are among people who are pleasant and easy to work with.	1	6	12	4
Totals	13	38	28	13

There were many other teachers, however, who were not interested in moving up in the educational hierarchy. As shown in Table 6, the teachers were least attracted by the idea that *The curriculum committee work you do has increased your chances of being offered a principalship or a consultant position*. These teachers indicated during the interviews that they enjoy teaching and are, therefore, content to remain classroom teachers.

Relative Importance of the Indicators of Extrinsic Rewards

The indicators of extrinsic rewards offered teachers recognition through a newsletter sent to parents, the inclusion of their names on the materials developed, release time for committee meetings, and extra pay. As indicated in Table 7, none of these indicators was attractive to the teachers.

Even release time, which could solve the problem of teachers incorporating curriculum work into their already busy schedules, was not attractive. The teachers felt that being released from their classrooms on a regular basis would be detrimental to students. As one teacher explained, “I find that I have difficulty leaving plans for a substitute teacher and I worry about my kids when I’m gone.” Said another, “I don’t like to be released from class because I enjoy teaching.”

The predominant attitude toward extrinsic rewards was that such rewards are nice but not a deciding factor in whether a teacher participated in curriculum development committees. This viewpoint was expressed by the teacher who, referring to the possibility of extra pay, remarked, “Sure, the extra pay would be great. We all love and could use extra money! But it wouldn’t be a good reason for getting involved.”

TABLE 6
Relative Importance of the Indicators
of Career Orientation

Category E: Career Orientation	Most Important	Important	Somewhat Important	Not Important
1. As your name becomes known for the committee work you have done, you may have the opportunity to do more curriculum work in an area of your choice.	3	11	5	4
2. You have increased your contacts with people at higher levels of the educational hierarchy.	4	5	9	5
3. Your work on the curriculum committee has enabled you to move into a more desirable teaching position.	2	8	4	9
4. The curriculum committee work you do has increased your chances of being offered a principalship or a consultant position.	3	2	9	9
Totals	12	26	27	27

TABLE 7
Relative Importance of the Indicators
of Extrinsic Rewards

Category F: Extrinsic Rewards	Most Important	Important	Somewhat Important	Not Important
1. You will be released from your classroom duties for committee meetings.	0	3	7	13
2. Your name will appear on the materials you helped develop.	1	1	10	11
3. You will receive extra pay for the curriculum committee work you do.	0	2	4	17
4. A newsletter describing the project and listing the names of the teachers involved will be sent home to parents.	0	0	3	20
Totals	1	6	24	61

Discussion

A major conclusion which may be drawn from this study is that certain variables are more likely than others to attract teachers to participate in curriculum development committees. Specifically, teachers will be willing to participate when they believe: (a) they will acquire knowledge and skills which they can use in their classrooms; (b) they will be actively involved in decision making which will affect their work; and (c) they will be able to offer their practical knowledge of students and classrooms.

It is also concluded that extrinsic rewards such as extra pay are not a deciding factor in teachers' willingness to participate in curriculum development committees, and that recognition of a teacher's expertise by administrators is more important to teachers than recognition by their colleagues.

If teacher participation in curriculum development committees is desirable—and the literature suggests that it is—it would be wise to design the committees in such a way that teachers will receive the rewards they desire. Four suggestions are made in this regard.

First, the findings showed that teachers want to grow professionally as a result of their participation. This suggests that the work of the committees be focused and planned in ways which will give teachers access to knowledge and ideas that they can use in their classrooms. It is important in this regard to select committee members and consultants who have had a variety of experiences in the field of education so that different perspectives will be brought to bear on committee work.

Second, active involvement in decision making is important to teachers. Therefore, they will need many opportunities to present their opinions and ideas, and their contributions to committee work must be treated with respect. Research by Duke, Showers, and Imber (1980) showed that teachers' desire to participate in decision making decreased when they believed participation was a mere formality or an attempt to create the illusion of teacher influence.

Third, teachers want to contribute to their committees their knowledge of students and classrooms. It is essential, then, that teachers be engaged in committee work which requires that kind of knowledge. In addition, the classroom orientation of teachers suggests that committee work begin with practical concerns and move gradually to a more theoretical level. Tom (1973) hypothesized in this regard that there may be a hierarchy of teacher needs which must be dealt with in curriculum work.

Fourth, extrinsic rewards such as extra pay may be offered *in addition to* the rewards discussed above. However, they are likely to be ineffective if they are offered *instead of* those rewards. According to the data, extrinsic rewards are the icing on the cake, but they do not offer the substance which teachers are looking for in curriculum work.

Teachers must perceive *at the time of recruitment* that curriculum committees will offer them the rewards they value. Accurate information about committee work could be disseminated to teachers through personal contact, group meetings, discussion at staff meetings, and descriptions in newsletters. The information could focus on the kinds of expertise the teacher can offer to the committee and the kinds of knowledge and skills that the teacher can expect to derive from participation.

Additionally, it may be wise for administrators to actively recruit committee members rather than call for volunteers, for this procedure would give teachers the recognition by administrators which appears to be important to them.

The reader is encouraged to reflect on these ideas and to develop others. The attempt is worthwhile because research indicates that participation in curriculum committees has a positive effect on a teacher's daily work. As one teacher in this study put it, "You just constantly have new and exciting ideas, and other people have things that you didn't think about before. So it really enhances the work you do in the classroom."

References

- Alutto, J.A., & Belasco, J.A. (1972). Patterns of teacher participation in school system decision making. *Educational Administration Quarterly*, 9(1), 27-41.
- Ben-Peretz, M. (1980). Teachers' role in curriculum development: An alternative approach. *Canadian Journal of Education*, 5(2), 52-62.
- Ben-Peretz, M., & Tamir, P. (1982). What teachers want to know about curriculum materials. *Journal of Curriculum Studies*, 13(1), 45-54.
- Broome, M. (1980). Professional self development through participation in curriculum development. *Journal for the Association for the Study of Curriculum*, 1(1), 24-31.
- Carlin, P., Purchall, K., & Robinson, I. (1976). The school based curriculum. *Curriculum and Research Bulletin*, 10(1), 9-15.
- Carswell, R.J.B. (1977). Teacher development as an outcome of Canadian studies in curriculum development. *Canadian Journal of Education*, 2(1), 35-42.
- Chung, C.Y. (1985). *Perceptions and preferences of teachers for the distribution of decision-making authority in schools*. Unpublished doctoral dissertation, University of Alberta.
- Connelly, F.M. (1972). The functions of curriculum development. *Interchange*, 3(2-3), 166-177.
- Connelly, F.M., & Ben-Peretz, M. (1980). Teachers' roles in the using and doing of research and curriculum development. *Journal of Curriculum Studies*, 12(2), 95-107.
- Conway, J.A. (1984). The myth, mystery, and mastery of participative decision making in education. *Educational Administration Quarterly*, 20(3), 11-40.
- Doll, R.C. (1974). *Curriculum improvement: Decision making and process* (3rd ed.). Boston: Allyn and Bacon.
- Duke, D.L., Showers, B.K., & Imber, M. (1980). Teachers and shared decision making: The costs and benefits of involvement. *Educational Administration Quarterly*, 16(1), 93-106.
- Forsyth, P.B., & Hoy, W.K. (1978). Isolation and alienation in educational organizations. *Educational Administration Quarterly*, 14(1), 80-96.
- Grassie, M.C., & Carss, B.W. (1972). School structure, leadership quality and teacher satisfaction. *Educational Administration Quarterly*, 9(1), 15-26.
- Holdaway, E.A. (1978). Facet and overall satisfaction of teachers. *Educational Administration Quarterly*, 14(1), 30-47.
- Hoy, W.K., & Miskel, C.G. (1978). *Educational administration: Theory, research, and practice*. New York: Random House.
- Johansen, J.H. (1967). The relationship between teachers' perceptions of influence in local decision making and curriculum implementation. *Journal of Educational Research*, 6(1), 81-83.
- Keith, L., Blake, P., & Tiedt, S. (1968). *Contemporary curriculum in the elementary school*. New York: Harper & Row.
- Leithwood, K.A. (Ed.). (1982). *Studies in curriculum decision making*. Toronto: Ontario Institute for Studies in Education.
- Lortie, D.C. (1975). *Schoolteacher*. Chicago: University of Chicago Press.

- Miller, T.W., & Dhand, H. (1973). *The classroom teacher as curriculum developer for Project Canada West*. Saskatoon: Saskatchewan Teachers' Federation.
- Miskel, C. (1972). The motivation of educators to work. *Educational Administration Quarterly*, 9(1), 42-53.
- Miskel, C.G., Fevurly, R., & Stuart, J. (1979). Organizational structures and processes, perceived school effectiveness, loyalty, and job satisfaction. *Educational Administration Quarterly*, 15(3), 97-118.
- Morrison, T.R., Osborne, K.W., & McDonald, N.G. (1977). "Whose Canada?" The assumptions of Canadian studies. *Canadian Journal of Education*, 2(1), 73-82.
- Oliver, A.I. (1970). *Curriculum improvement: A guide to problems, principles and procedures*. New York: Dodd, Mead.
- Tom, A. (1973). Teacher reaction to a systematic approach to curriculum implementation. *Curriculum Theory Network*, 11, 86-93.
- Verduin, J.R. (1962). *Cooperative approach to curriculum change*. Unpublished doctoral dissertation, Michigan State University, East Lansing, MI.
- Walton, J., & Morgan, R. (Eds.). (1978). *Some perspectives on school based curriculum development*. Armidale, NSW: University of New England.
- Wickstrom, R.A. (1973). Sources of teacher job satisfaction. *Canadian Administrator*, 13(1), 1-5.
- Young, J.H. (1984). *The relationship between school budgeting and school curriculum*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.
- Young, J.H. (1985). Participation in curriculum development: An inquiry into the responses of teachers. *Curriculum Inquiry*, 15(4), 387-414.
- Zisenwine, D. (1982). A curriculum development project: The individual school operation. *Journal of Curriculum Studies*, 14(3), 259-261.

PERSPECTIVES

The Crisis of Confidence in British Higher Education

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There is currently a major crisis of confidence in British higher education, largely as a result of government policies. This article seeks to explore the nature of the crisis, how it came about, and implications for other higher education systems. The changing pattern of higher education provisions is traced, and the "binary" division between public colleges and polytechnics and universities is analyzed. Because there is concern about the growth of central government intervention, there is also a section on the administrative and political framework of the country. Six areas of conflict between central government and higher education are identified as finance, internal efficiency, numbers and the future shape of higher education, teacher training, competition, autonomy and accountability. It is argued that new funding arrangements, demands for management efficiency, and accountability have changed and will continue to change the shape of higher education provision. Other countries could learn from the British experience.

Greater changes have taken place in the development of higher education in the United Kingdom (UK) during the past 20 years than at any time in the country's previous history. The traditional pattern of higher education, dominated by the élite, academically respectable, and research-orientated universities, especially Oxford and Cambridge, with a second tier of colleges of technology and teacher training colleges, was shattered and changed for all time in the 1960s. This was an age of optimism (Weiler, 1978), expansion, and experimentation, when new universities were created, new technological universities were developed, specialized polytechnics were opened, and teacher training colleges were upgraded. It was a period of rapid expansion in student enrollments in all branches of higher education.

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The economic crisis of the mid-1970s, together with the financial squeeze, growing unemployment, and the more fundamental shift in political philosophy since the Conservative government came to power in 1979 have all had an impact on higher education to such an extent that there is today a major crisis of confidence. A caring welfare society which perceived higher education as a right, even a necessity and not a privilege, has given way to a society—at least as viewed from government level—which perceives efficiency, improved management styles, market forces, and value for money as the supreme goals. The result is that there have been even more dramatic changes in higher education since the beginning of the 1980s. These changes have, so far, been more philosophical and managerial and less structural than in the 1960s, but all the current evidence would imply that the most radical shake-up that British higher education has seen in a generation is about to take place. The result is that higher education in all parts of the United Kingdom is in a state of uncertainty and crisis. Whether the crisis will be surmounted or whether the system that will emerge in the 1990s will be very different is a matter of conjecture.

This article seeks to explore how this crisis has come about, to examine some of the issues at the heart of the debate, and to draw some implications for other systems undergoing similar changes. At the outset, however, it must be stressed that the heart of the crisis is dominated by the fundamental question of what is or should be, the relationship between central government and institutions of higher education in a western democracy. Traditionally, the latter have valued as sacrosanct their academic freedoms, autonomy, and rights of criticism of the state and of government policies. Now they are beginning to realize not only that these widely held and carefully nurtured beliefs are open to challenge but that government is prepared to criticize these self-same institutions, especially the universities, is prepared to interfere with their long-established traditions, and is more than ready to apply the same criteria of efficiency, effectiveness, and accountability to educational institutions as it does to industry and other public sector institutions. Above all, government is prepared to ignore higher education in reaching its decisions. The result is that many academics have found themselves increasingly threatened and insecure. They are undergoing a crisis of confidence.

Background

The current crisis must be viewed against the backdrop of the traditional pattern of higher education, previous expansion, and reform efforts as well as the political and administrative framework of higher education.

The Traditional Pattern of Higher Education

Until this century higher education in the United Kingdom (England, Scotland, Wales, and Northern Ireland) consisted of universities and a small number of specialist research institutions. These universities had their roots in medieval Europe (Trevelyan, 1946) and although a few Oxford and Cambridge colleges were founded in the 13th century, and three of Scotland's ancient universities were founded in the 15th century,¹ the majority of the so-called civic universities did not open until the 19th century.²

The purposes of the "Liberal University" (Scott, 1984), as these universities came to be known, were the pursuit of knowledge and research for their own sakes, the pursuit of academic excellence, the fulfillment of the individual, the quest for truth, and, later, research associated with industry and employment. Freedom of speech and opinion were also hallmarks of British universities, even during periods of war, though

many academics believe now that these freedoms are under increasing attack from both the extreme right and the extreme left of the political spectrum.

Until the 1950s higher education in the United Kingdom (i.e., university education and colleges of advanced technology) was essentially selective, elitist, and academic. It was also surrounded by a number of myths, which have recently resurfaced in the debate, namely that universities have always been institutions of high academic learning and that they are essential for tendering specialist advice and opinions to government policy makers. However, Bell and Grant (1977) have shown that during the 18th and early 19th centuries not only was there corruption in the universities, with rampant nepotism and unfilled chairs, but the academic standards had sunk so low that universities had become little more than finishing schools for teenagers. They have also shown that they were largely irrelevant in the great political, social, and economic developments that were taking place at that time. The industrial and agricultural revolutions happened regardless of the universities, and many of the most important political figures achieved preeminence without having attended university. In spite of statements by the present government stressing the importance of the universities for Britain's future development (HMSO, 1987a, p. 1), many academics feel that actions belie this professed support and resent their loss of power and influence on affairs of state. A similar situation appears to have happened in Japan (Cummings, Amano, & Kitamura, 1979).

Nevertheless, by 1960 only 4% of the age group of 18+ was enrolled in any form of higher education. This was believed to be one cause of the country's poor economic performance compared with other industrialized nations. The result was that a major commission, under the chairmanship of Lord Robbins, was set up "to review the pattern of full time higher education in Great Britain. . . in the light of national needs and resources" (HMSO, 1963). The recommendations of the Robbins Report and the massive changes that took place in the 1960s were to transform the pattern of British higher education. Twenty years later that pattern is, once again, being reviewed.

Expansion and Reform

Not only do the 1960s mark a watershed in the history of education throughout the world as systems expanded rapidly (Coombs, 1968, 1985) but in the United Kingdom, as elsewhere in the industrialized world, there was a move away from elitist to mass higher education (Bereday, 1973; Neave, 1976; Organisation for Economic Cooperation and Development [OECD], 1971; Trow, 1979) as universities changed their shape, role, and size, as they were expected to cater for the needs of society in a way not hitherto undertaken, and as new course structures, teaching methods, forms of assessment, and curricula were developed, and as new and different types of higher education institutions (e.g., polytechnics) were created. Within a decade the result was that the percentage of the age group enrolled in higher education had risen from 4% to 16%. Inevitably, however, as costs began to escalate and university campuses became more politicized (Gould, 1977), governments began to take a closer look at university affairs, at how they were governed and financed, at how far they were meeting the manpower needs of society, and at alternative forms of provision. It is perhaps not surprising that there was going to be a backlash. This began in the 1970s and has continued into the 1980s (Kogan & Kogan, 1983).

Following on from Robbins, not only were there philosophical changes but there were also major structural changes. The most fundamental philosophical change was that anyone acquiring minimum qualifications at the General Certificate of Education Advanced level (taken at 17/18+) should be entitled to enter university or other

institutions of higher education. Higher education was perceived as being beneficial to society and to the economy generally, and the social demand for places should be met. The philosophical assumption that there should be an upgrading of institutions—for example, colleges of advanced technology to the status of technological universities and teacher training colleges to the status of tertiary level colleges of education or higher education—was also accepted. However, the suggestions that there should be a separate ministry of higher education as in the United States and France, and that all higher education should come under the university umbrella were both rejected, especially by the new Labour government. Indeed, Mr. Anthony Crosland, the Minister of Education in Harold Wilson's first Labour government went out of his way to create what has since been known as the "binary system" of higher education—separate but equal development of different types of higher education, with the universities remaining relatively autonomous under the direction of a University Grants Committee (UGC, see below) and with technical further education colleges, colleges of education, and newly created polytechnics coming under the control of local education authorities (LEAs) and being closely linked with local industry and employment opportunities (Fowler, 1972; Department of Education and Science [DES], 1966).

The results of this public debate about higher education were that ten "new" campus-style universities, with novel ideas about student accommodation, management styles, forms of assessment, modular courses, and new academic structures were opened in different parts of the country (Perkin, 1972); a new style distance teaching Open University was established by act of parliament in 1969 using radio, television, and the postal services for teaching students in their homes (Ferguson, 1972); and 13 colleges of advanced technology were upgraded to university status. The number of universities doubled from 22 to 45. On the other side of the "binary divide" the 1966 White Paper *Higher Education in the Further Education System* (HMSO, 1966) and subsequent legislation led to the full scale development of 30 polytechnics (29 in England and 1 in Northern Ireland)³ created from colleges of technology, art, and commerce, with considerable academic freedom and financial autonomy, with close links with local industry and offering rival courses to those offered by universities. In Scotland there are no polytechnics, but the nearest equivalent, the central institutions, come not under local authority control but under central government control by way of the Scottish Education Department. The size of their impact on higher education can be seen from the enrollment figures. Although enrollments in the 1960s were relatively small, by 1983/84 there were 269,000 students enrolled in polytechnics compared with 292,000 students enrolled in universities (DES, 1985a). However, since 1979, over 75% of new enrolments have gone into the polytechnic sector (HMSO, 1987b). It is little wonder that there is now considerable rivalry between the polytechnics and the universities.

One other feature of the binary divide was the upgrading of teacher training to higher education status with colleges of education offering three-year certificate courses followed by a one-year B.Ed. degree (Dent, 1977). The James Report (HMSO, 1972a) advocated the abandonment of "monotechnic" teacher training institutions and their replacement by liberal arts type colleges very similar to those existing in the United States and Canada. During the 1970s many colleges of education therefore merged with colleges of art, commerce, or further education to form new institutes of higher education, but at least one third were closed down. The criteria by which they were forced to close or merge were seen as a growing intervention on the part of central government, and as the beginning of official scrutiny into the performance of

education at every level (DES, 1973, 1976, 1987c; Evans, 1985; Hencke, 1975; OECD, 1975). What happened in public sector teacher training has been seen as the trial run for government intervention into higher education generally (Hencke, 1978).

Political and Administrative Framework of Higher Education

Politically, England and Wales, Scotland and Northern Ireland form the United Kingdom of Great Britain and Northern Ireland and are represented in parliament at Westminster. Administratively, there are separate offices of state for the smaller constituent countries (e.g., the Welsh Office) whose secretaries of state have responsibility for all nonuniversity educational matters. Although Scotland and Northern Ireland also have their own small education departments, the Secretary of State for Education and Science, currently the Rt. Hon. Kenneth Baker, MP, has jurisdiction over all levels of education in England and Wales and over higher education in Scotland and Northern Ireland (Bell & Grant, 1977). The minister's influence and jurisdiction over all educational matters, especially those pertaining to higher education, have increased considerably during the 1980s (Hall, 1984; Winterson, 1986). Apart from its control over student numbers, financial allocations, teacher training, regulation, and recognition through the Department of Education and Science (DES) and its counterparts the Scottish Education Department (SED) and the Northern Ireland Department of Education, central government has until recently delegated most of its powers for administering and overseeing the education service to local education authorities (LEAs). In England these are made up of 39 county councils, 36 metropolitan district councils, 20 outer London boroughs, the Inner London Education Authority (ILEA) and the Isles of Scilly. In Wales there are eight county councils and in Northern Ireland there are nine. Scotland has nine regional councils and three island authorities (Inner Hebrides, Outer Hebrides, Orkney and Shetland) but their responsibilities are virtually the same (Fenwick & McBride, 1981; Jennings, 1977; Regan, 1977). In the field of higher education they are responsible for administering colleges of higher education and further education colleges and polytechnics (where these exist). They have no jurisdiction over the universities, though there is usually close cooperation between universities and local authorities.

Since 1982 there have been two coordinating bodies, the National Advisory Body for Public Higher Education (NAB) for England and the Wales Advisory Board (WAB), to advise on matters concerned with higher education in the public sector. They are national bodies working closely with regional advisory councils which represent the universities, local authorities, commerce, and industry as well as public sector higher education institutions. Their prime concerns are monitoring standards and student numbers, and course rationalization. However, under new government proposals their demise is inevitable.

The long-standing advisory body concerned with the university sector is the University Grants Committee (UGC). Established in 1919, it was designed as a buffer between the DES (then the Board of Education), the Treasury, and the universities (Mann, 1979). Until 1964 it received funds from the Treasury to disburse throughout the universities, but in that year the DES took over responsibility for its funding. Increasingly, far from being viewed as a buffer, the UGC has been perceived with hostility and suspicion as an agency of government playing a very important role in university affairs. There is much justification in this view for although in theory the UGC has complete freedom in allocating funds to the 45 universities and other institutions for which it is responsible, it works very closely with the DES in deciding on the number of undergraduates any university should have in a period of years. It also decides

on rationalization of courses and “advises” on whether a department should be opened or closed, makes recommendations on fee structures, and lays down guidelines for staff-student ratios in different faculties.

In order to counteract the growing power and influence of the UGC and to form a united front, the vice chancellors of universities came together to form the Committee of Vice Chancellors and Principals (CVCP) in the 1920s. This is an important body, not only because it allows free and open discussion between the principals of all the nation’s universities, but because it is a forum for thrashing out a united response to government policies of which it disapproved, and because it has become an important pressure group opposing the government’s political and financial pressures on the universities in recent years. Thus when the UGC produced its advisory statement on the purpose and future shape of universities for the government in 1984 (UGC, 1984) and the government followed this up with its own discussion document on *The Development of Higher Education into the 1990s* (DES, 1985b), the CVCP felt bound to respond. *The Future of the Universities* (CVCP, 1986) takes to task the government’s predictions about numbers, its perceptions about the role of a university in modern society, and the unrealistic demands placed on universities to raise standards and improve research within the constraints of resource cutbacks and minimum research funding. The CVCP and individual university vice chancellors have also reacted, sharply but positively, to the *Jarratt Report* on university administration and efficiency which itself established by way of preempting a government report (CVCP, 1985). Suffice it to say that the CVCP has become an active political body defining the rights and freedoms of universities against increasing political intervention.

On the other side of the “binary divide” the most important body is the Council for National Academic Awards (CNAA), an institutional body set up in 1964 with the intention of validating degrees and qualifications other than those awarded by universities and professional bodies. Not only did the creation of the CNAA allow many public sector institutions to develop their own degree courses, but it removed once and for all the universities’ power and influence over setting academic standards. Indeed the rigorous standards applied by the CNAA not only to the validation of courses but to the evaluation of institutions, staff appraisal, and curriculum design, leave many universities far behind. It is perhaps the very success of the CNAA in developing the concept of an institution constantly being prepared to undergo critical self evaluation and in pushing through academic courses of excellence that has created a sense of anxiety in many university circles.

Current Issues and Areas of Conflict

Turning now to the crisis of confidence previously alluded to, it was perhaps inevitable that, with the growing skepticism about education’s place in the economic development of a nation and with the growing attack on educational standards below tertiary level, higher education, especially the university sector, would soon come under the political searchlight. Since 1976 it is possible to identify six issues or areas of concern in United Kingdom higher education, all of which are linked with growing central government intervention and control, thereby calling into question the so-called autonomy in higher education. The six areas are finance, internal efficiency, numbers and the future shape of higher education, teacher training, competition, and autonomy.

Finance

Undoubtedly finance is at the heart of the current crisis, not only as governments seek to make higher education more effective and efficient, but as they have reduced their financial contributions in real terms.

The breakdown of the quinquennial system of budgeting has had disastrous effects. Until the late 1970s universities were given a five-year rolling budget, but for the past ten years they have had to operate on an uncertain annual budget which might not actually be known until part of that year's annual expenditure has already been incurred. Cutbacks of 4% were made in 1976/77 and have continued annually since then. New figures announced by the UGC in late 1986 for the next five-year period until 1990 suggested a cash increase from £1,716 million to £2,074 million but actually amount to a 5% per annum reduction grant in real terms. Coming at a time of reduced student numbers at undergraduate level, as government has placed limits on different universities in an attempt to raise standards by only allowing the best qualified youngsters to enter university (but not at the same time placing a ceiling on polytechnics and other advanced further education institutions), and when fee income has risen from 4% in 1975/76 to over 26% in 1985/86 and is therefore an important ingredient in the financial equation, universities especially are being forced to make financial savings and/or to raise additional revenue.

The most dramatic attempt to make savings has come through staff cutbacks. Between 1981 and 1984 university incomes from government were reduced by 11% and universities were told that they had to lose 3,000 academic staff and 4,500 ancillary staff (secretaries, technicians, laboratory assistants, etc.) especially in those areas not considered by government to have prime economic importance. According to a report from the National Audit Office, government planning went awry (*Economist*, 1985). Less than 3,000 ancillary related staff left while nearly 4,500 academic staff, especially in engineering, science, computer science, and technology, those academic departments that government wished to protect, took voluntary redundancy or early retirement and enhanced financial benefits before being reemployed elsewhere on far higher salaries. The cost to the government in terms of redundancy money has been in the order of £238 million.

The cost to staff morale is immeasurable, since those remaining within the system feel that their role and status have been devalued. Promotion prospects are few. Senior posts have been frozen. Salary erosion of the order of 39% *vis-à-vis* comparable professions since 1979 has meant that it has been increasingly difficult to recruit staff of high calibre and the right qualifications. Industry, commerce, the civil service, and the armed forces have benefited at the expense of the universities. The end of the tenure system of any new faculty appointments and short-term contracts for all new staff make it very difficult to attract new talent. The long-term impact on research, teaching, and creative ideas can hardly be measured. Although in the early part of 1987 the government relaxed its rigid position on promotions and was prepared to raise university salaries quite substantially (24% over a 15-month period), especially at the higher grades of senior lecturer, reader, and professor, it remains to be seen whether the flow of good academics away from the universities can be stopped. Financial constraints, nevertheless, remain tight. Universities, therefore, are having to resort to other, often petty, means of making savings. These range from reusing envelopes and recycling waste to cutting down on telephone and heating bills, to increasing staff-student ratios, cutting out whole departments and not filling vacant posts. Where universities traditionally had a staff-student ratio of 1:10 it is now 1:14.9 in many departments. Polytechnics still have a ratio of 1:11.5, but they have not yet felt

the same government pressures as universities because they are perceived to be more closely associated with industry and to be more efficient. The government argues that between 1980/81 and 1986/87 unit costs fell in the universities by only 5% compared with 15% in polytechnics and local authority colleges (HMSO, 1987a, p. 15). However, the universities argue that their costs are so much lower because of hidden overheads and LEA subsidies.

Theoretically, raising additional revenue is a more positive approach than cutting back on expenditure, but if this involves selling off real estate, buildings, agricultural land, or university art treasures, many believe that this not only betrays the prudent management of the past but is only a short-term solution to deep-rooted problems. For many years now, a number of universities have offered facilities and hostel accommodation for conferences and holiday flats in return for income. They are now being encouraged to tout for business at commercial rates, as the polytechnics have done for many years, selling consultancies, offering joint industrial research ventures, attracting research funding or funding from overseas governments in return for tailor-made courses. Instead of being institutions of academic research and teaching, untainted by the commercial dimensions of society, universities have found themselves thrust into the marketplace—but with considerable disadvantages. Fees illustrate this point.

Fee income is vitally important to all universities as it is to all higher education. Over 95% of undergraduates have their fees paid from public funds (by LEAs or by central government), but with the reduction of numbers at university imposed by government, and with penalties imposed against universities if they do not adhere to their target numbers within a reasonable margin of error, alternative approaches have had to be considered. Here again, however, universities find themselves in a dilemma. Government is discussing the replacement of the grant system with loans, a mixed loan system, or with vouchers (Atkinson, 1983; HMSO, 1987a). The impact of any of these options is unpredictable. The only certainty is that universities are going to be competing even more unfavorably for students whose overall numbers may decline anyway, or who will choose public sector institutions because they are far cheaper.

The most obvious increase in students must be at postgraduate level and from overseas. Since 1977, however, the discrepancy between home and overseas student fees has been a bone of contention (Williams, 1981; Williams, Kenyon, & Williams, 1987). The policy of “full cost” fees imposed by the present government means that in 1987 a postgraduate overseas student will be paying about £3,500 for an arts or social science course or about £6,000 for a medical science course, twice as much as for home-based students and infinitely more than at most universities in other industrial nations. Moreover there has been a decline in indigenous postgraduates because of their reluctance to fund the cost of increasing fees from their own pockets.

Perhaps the biggest anxiety facing universities is the reduction in the number of research grants. The budgets of the Economic and Social Research Council, the Science Research Council and the Medical Research Council have all been reduced considerably. The research councils' grants have increased cash terms from £575 million in 1981/82 to £604 million for 1985/86, but it is estimated that because of inflation and the escalating costs of research, especially in the medical and scientific fields, that in effect this amounts to a steady erosion of research funding. The decline in research grants to universities means a reduction in research carried out and in the ability of universities to attract staff of outstanding or international calibre. Many industrial concerns are more likely to undertake their own research, using their own staff and premises. Universities are having to prove to government and to industry that their research is of economic value and importance.

Polytechnics have had far fewer constraints placed on them in their quest for additional students. They have marketed their courses to attract large numbers of overseas students, they have been more flexible in their offerings to part time students, and in attracting mature students, especially for in-career vocational education such as the Professional, Industrial, and Commercial Updating (PICKUP) program. The latter are short courses offered for those working in business and industry. While the universities have to some extent been involved, the public sector colleges through NAB and WAB have used the bulk of the £6 million "pump-priming" money made available by government.

What is concerning the universities now more than anything, however, is the government's proposals to abolish the UGC and to replace it with a new funding body, the Universities Funding Council (UFC, DES, 1987a) directly under government control and to replace the existing system of UGC grants with a mixed system of grants and contracts whereby individual departments would have to tender for grants on the basis of research projects (DES, 1987b). Any financial shortfalls would have to be made up by touting for commercial business from the private sector. Thus the traditional rules of the game whereby universities expected to receive the bulk of their income from central government have been, and are being, subtly but forcefully changed.

The public sector also is feeling the winds of change. From April 1989 NAB and WAB will cease to exist and the polytechnics and other public sector colleges of higher education will cease to be administered by and funded through LEAs. Instead a new Polytechnic and College Funding Council (PCFC) directly under central government control will be responsible for coordinating and overseeing the majority of public sector institutions (DES, 1987c).

Although the new funding arrangements are part of an attempt to restructure higher education finances, they are also part of an ongoing conflict between central and local government and a further example of growing centralization over key policy issues. The result is that British universities and colleges are turning more and more to marketing their offerings in a professional manner both at home and overseas, offering tailor-made courses at a cost that brings in a profit, so that if necessary additional personnel can be brought in, or offering paid consultancies to firms or to overseas governments and foundations. The result is that the liberal university of 20 or 30 years ago is rapidly becoming a thing of the past as modern technocratic universities respond to market forces and adopt the approaches of the marketplace in a vigorous manner. How this will affect their development and philosophy the next decade will reveal better. Some vice chancellors and polytechnic principals regard the management of their institutions on contracting budgets in times of great social and economic change with misgivings; others accept the challenge with enthusiasm.

Internal Efficiency and Administration

Closely linked with the financial crisis is the crisis of internal management and administration. Here again the universities feel that they are disadvantaged *vis-à-vis* the public sector institutions the other side of the binary divide. Not only do a number of vice chancellors believe that there has been unnecessary waste and maladministration in polytechnics and colleges of higher education because of split sites, top-heavy administrative hierarchies, and bureaucratic structures, not only do they know that there have been several inquiries into financial malpractice, but they believe that the better cost ratios in the public sector colleges come about largely because many of the overheads are hidden and because LEAs enable them to compete for degree level

students by deliberately subsidizing fees. Above all, they believe that universities have been unfairly singled out by government for public criticism.

Although government established NAB and WAB as coordinating bodies for all public sector higher education in an attempt to monitor courses and to develop closer liaison with industry, university vice chancellors would argue that the UGC exercises a far more stringent control over their affairs than has ever been exercised by NAB or the LEAs over the polytechnics and colleges of higher education. Not only does the UGC have the right to exercise control over student numbers at each university, allocate grants to each university, and even insist on the closure of individual departments if it believes there is unnecessary duplication, but in the spring and summer of 1986 it undertook a review of all university departments throughout the country in an attempt to rank them as excellent, above average, average, or below average in terms of research output. It has been argued that this exercise was of doubtful value and the research methodology was highly questionable and inapplicable to the social studies/humanities departments. It is felt that the long term effects will be to jeopardize certain departments which will be in danger of attracting fewer students or less research funds now that the ranking has been made official. Vice chancellors rightly argue that no such inspection or evaluation has been made of polytechnics and also, with some justification, argue that the process of rationalization has been going on for some years. London University, for example, has been undertaking its own rationalization for the better part of a decade. Directors of public sector institutions would respond that CNAA validation implies constant monitoring and inspection and that they have tightened up on efficiency. However, there would seem to be little doubt that government does intend to press ahead with its ranking of institutions and/or departments within them. Thus universities as a whole, or specific university departments with a proven track record for high quality research, are more likely to receive better funding than those which are predominantly teaching institutions.

Where universities would find it hard to rebut criticism is on the grounds of staff contracts, tenure, and accountability. Staff contracts in the public sector are far more specific over hours of work and time to be spent on the premises. Most university contracts are far more open-ended on this, believing in academic freedom and the integrity of staff to honor the spirit if not the letter of the contract. But while the majority of university staff still have tenure, this is far less widespread than is generally believed and most new appointments in the past decade have been of limited tenure only. However, it should be pointed out that university staff salaries have been consistently eroded *vis-à-vis* all other groups of teachers since 1976/77 and that there is a widespread belief that they have borne the brunt of political antagonism against higher education. As already mentioned, the government has negotiated an increased pay settlement for the period 1986-1988 but the damage already done to staff morale will not easily be remedied.

Nor have public sector institutions been advised to tighten their administrative structures quite as the universities have. The Oakes Report (HMSO, 1978) called for greater rationalization and coordination in the public sector but little that is practical has yet developed from this. However, many polytechnic principals have argued that they would like to be funded and controlled by central government, thereby avoiding the political and administrative delays of local authority management (*Observer*, 1987). They will, therefore, welcome the introduction of the PCFC, though whether they will welcome the stricter fiscal management that will be imposed on both polytechnics and the universities remains to be seen. The *Jarratt Committee Report* (1985), which was commissioned by the CVCP to explore ways of improving efficiency

and management structures in universities in the light of growing political criticisms, has already called on the universities to exercise greater financial control over their courses, to make individual departments more cost effective, to introduce business management techniques into all areas of university administration, to streamline the committee structures, to develop rolling plans and evaluation, and to introduce arrangements for staff development, appraisal, and accountability. Many academics have rejected the Jarratt proposals as unworkable in universities; others have given a qualified welcome. Either way, all vice chancellors and senior academic staff are taking the report seriously, knowing that if they do not, government will impose its own solutions.

Certain areas of improvement are undoubtedly possible. Individual departments could be given greater responsibility over departmental finance, over marketing and recruitment, all of which is happening in many universities already, but where the government imposes fee levels and restricts budgetary control and where there is tenure, or there are limited opportunities for promotion of able staff, or there is inadequate control over forward planning or staff development, and where government has made it quite clear that it wishes to support certain faculties and departments (e.g., engineering, science, technology, computer studies, and information technology, etc.) at the expense of others, it is hard to see that Jarratt's managerial proposals can work effectively.

It is also hard to see that universities can be managed like multimillion-pound businesses unless they have greater control over the price fixing of courses and over staff salaries. Where there have been semi-independent departments in universities financed separately from normal university departments they have proved highly successful. It may well be that if the Conservative government remains in power until the mid/late 1990s, some universities will become private and truly autonomous but this still remains highly speculative. At present, only the University of Buckingham, established in 1973, though not given a royal charter until 1983, fits the category of independent and autonomous.

Numbers and the Shape of Higher Education

The peak year for live births over deaths was 1965 when 823,000 children were born. By 1975 that figure had dropped to 526,000. The implications for higher education have been serious, and one of the prime concerns of university administrators during the 1980s has been that of student numbers. Between 1979 and 1985 the CVCP calculated a 35% drop in the number of applicants in spite of the "bulge" passing through upper secondary level. By 1989 it is calculated that there will be an even greater decline. A glance at the numbers of enrollments helps to clarify the position. In 1938/39 there were 50,000 full-time students enrolled in universities. By 1983/84 there were 292,000 in public sector institutions (DES, 1984).

The issue of student numbers was raised by the DES in a discussion document entitled *The Development of Higher Education into the 1990s* (1985b). This mentioned a 10% increase in student numbers from 280,000 to 310,000, but it recognized that there would also be a significant increase in public sector enrollments with no accurate predictions of where 18-year-olds might opt to go. Social demand planning is far less accurate than manpower planning. The DES recognized the uneven annual forecasting because of uneven annual flows and it suggested five possible solutions for "tunneling through" without a massive increase in finance. In the end these suggestions proved to be little more than academic since government imposed its own solutions—universities were to accept a smaller proportion of students, as the figures

already mentioned reveal, and were to allow staff-student ratios to rise. With the growing difficulties of attracting overseas students and mature inservice students because of government imposed fee increases, university finance officers and admissions officers have been faced with growing uncertainties and difficulties. There is no easy solution in the years immediately ahead. However, what is becoming apparent is that in its concern for rationalization and efficiency the present government is beginning to see a blurring at the edges of the binary divide. In 1984, the New University of Ulster and Ulster Polytechnic were merged into the University of Ulster. Several universities, notably East Anglia, Durham, Exeter, and Warwick have absorbed nearby colleges of education. In Wales there are plans to rationalize teacher education across the binary divide, and in Cardiff a new University of Wales at Cardiff will be created by merging the University College and the University of Wales Institute of Science and Technology. How far this transbinary rationalization will go remains to be seen, but once the precedent has been established it may not be easy to stop.

Teacher Training

It is perhaps because of the truism that every education system is only as good as its teaching force that of all areas of higher education in the United Kingdom, teacher education has been the most under the spotlight in recent years and has undergone—or is undergoing—the most radical change. From 120,000 teachers in training in 1971/72, the number fell to 29,000 by 1985/86. Inevitably this has led to structural changes, as previously mentioned, but the declining birthrate, along with government concern for academic standards, has led to some radical rethinking about the place, shape, and content of teacher education.

It is in the latter area that government has become increasingly involved. Apart from curriculum issues, more official documents have been issued relating to teachers and teacher education in the past few years than on any other single educational topic (DES, 1980, 1983a, 1983b, 1985c, 1986). Since 1980/81 all teachers in training, whether in colleges of higher education, University departments of education (UDEs), or polytechnic departments of education (PDEs), have been awarded degrees rather than certificates. Gradually teaching will become an all-graduate profession. Thus from colleges students now receive a B.Ed. degree, while at a polytechnic or university department of education they receive a Postgraduate Certificate in Education (PGCE) after an initial specialized subject degree.

PGCE courses have undergone considerable changes in recent years (Alexander & Whittaker, 1980). Not only has there been a decline in the teaching of educational disciplines (psychology, philosophy, comparative education, history, sociology, etc., Watson, 1982; Watson & Williams, 1984) in favor of more pragmatic classroom focused work, but the government is insisting on a longer training year from 1987/88 onward—36 weeks instead of 32—closer liaison with schools, and for all training staff to have “recent and relevant” experience in the school classroom so that theory and practice become more closely interrelated and in the hope of improving the quality of the teaching profession.

Government has also insisted on the right of inspection of all teacher education institutions and of accreditation. The Council for the Accreditation of Teacher Education (CATE) was established in 1983 by the then Secretary of State for Education Sir Keith Joseph in an attempt to ascertain what was happening in teacher education as well as to monitor the quality of the teacher training offered. CATE was modeled on the American National Council for the Accreditation of Teacher Education (NCATE), an agency of the American Association of Colleges for Teacher Education

(AACTE). Complaints about CATE from the different sectors of teacher education have focused on the fear of uniformity and control, charges flatly denied by government, and on resentment that many of the CATE accreditation teams are not educationists, let alone teacher trainers. However, so-called “CATE criteria”—“recent and relevant” teaching experience on the part of staff involved in initial teacher training, approval of course length and content, classroom management techniques, standards of professionalism among staff—have all had a profound effect on all teacher training institutions. Moreover, there is now a reluctant recognition that, unless they have been inspected by HMI and accredited by CATE, institutions will not be able to undertake any recognized form of teacher education by the late 1980s. This is a not unusual situation in many countries, but in the context of the United Kingdom it smacks of growing central government control and interference, particularly as until the mid-1980s HM Inspectorate had no automatic right of entry into universities.

UDEs have also felt that they have been pressured externally by DES, HMI, CATE, as well as LEAs, in a manner that no other university departments have. There is also some concern that initial teacher education could be removed from the university sector altogether and transferred to public sector colleges of higher education or to polytechnics. The UDEs would then be left with advanced higher degree work, research, and some inservice training. This is the normal pattern in Scotland, Stirling University being the exception, but it would be resisted bitterly in England and Wales on the grounds that PGCE students from UDEs have a better employment record than do B.Eds. from colleges, but more especially because of another major area of uncertainty—INSET (In-Service Education of Teachers). For the past 40 years following the McNair Report (HMSO, 1944), LEAs have seconded teachers on full-time inservice training courses run by their own institutions as well as by UDEs, so that they may work for a higher degree, usually a taught diploma or master’s course. Under new government regulations (DES, 1986) this system ceased to operate from 1 April, 1987. Moreover, government has established 22 national priority areas for training and has thrown the onus onto the LEAs, and not higher education, to draw up programs for INSET which will involve far more teachers across the primary/secondary level divide in school based or classroom focused training. This is supposed to be cost effective and to have the maximum impact on the local school system in the shortest possible time. However, it does mean that training institutions have lost, and will continue to lose, students.

The whole area of teacher training is thus in a major state of flux, but UDEs are the institutions that feel most threatened. They recognize that they can no longer rest on existing working patterns and assumptions. They too must compete in the marketplace in a way that they have not hitherto been used to.

Competition

Changes in INSET provision are but one example of the growing competition between tertiary level institutions. Not only are *all* teacher training institutions involved in advanced degree work competing with each other for a decreasing number of full-time students, but they are also competing in their ability to offer short-term courses, consultancies, and “packages” for customers such as LEAs. The idea of tertiary level colleges marketing their wares is not uncommon in the United States where there are a large number of private institutions competing with public state universities and colleges (Grant, 1985; King, 1979), but in a system such as that of the United Kingdom where most tertiary level education is essentially financed from public money (DES, 1985a; Atkinson, 1983), the idea of marketing is both new and challenging. Teacher

education, however, is only one area where competition is developing.

With the proliferation of different types and sizes of tertiary institutions during the past 10 to 15 years, rivalry and competition were inevitable. The merits of different colleges, courses, their pastoral care, or simply their location, tradition, and reputation have all been used to win over students (Chan, 1987). Institutions have been improving their brochures, advertising literature, and marketing procedures for some years. A number of universities and polytechnics have appointed marketing managers during the past few years with the express purpose of devising ways and means of attracting more students, research funds, and offering special courses, especially to overseas governments from Third World countries. A sense of business entrepreneurship and frenetic activity has affected a large number of tertiary level institutions to such an extent that there has been growing concern that the quantity of student enrollments is more important than the quality or the scholarship. There is a fear that the leisurely academic way of life is being sacrificed on the altar of financial necessity. An announcement on November 6, 1986 by the Secretary of State for Education that education is to receive an additional £186 million in the financial year 1986/87 with an additional £95 million going to the universities may help to restore the balance. However, there is no doubt that the perceptions and attitudes of college and university staff in the mid-1980s is fundamentally different from that of a decade earlier and that a sense of uncertainty about future directions is affecting staff morale and research output.

Equality, Autonomy, and Accountability

There are other issues concerning UK higher education which are of a more philosophical than administrative or political nature. In the heady days of the expansion of higher education in the 1960s it appeared that there would be greater equality of opportunity for all qualified students to enter higher education. After all, this was the trend throughout industrial Europe (Halls, 1985). Institutions felt that they had a degree of autonomy over who they accepted and over what courses they offered. With no attempt at manpower planning they believed they could begin offering courses in areas hitherto not recognized as typical at that level—for example, accountancy, social studies, management studies. However, as criticisms in the 1970s began to be leveled at declining academic standards and the growing politicization of many courses and departments (e.g., Gould, 1977), more conservative elements began to consider a return to the more elitist period of before the mid-1960s. One of the chief architects of this movement was Sir Keith Joseph. His concern was that the search for truth had been subordinated to the development of vocationally relevant courses and that, as a result, universities had betrayed their trust. He was also convinced that many students studying at university would be better occupied in more technical and vocational courses offered by polytechnics and other public sector institutions (Joseph, 1974). It was this kind of argument that prevailed in the Conservative Party and led to the cutback in university enrollments in the mid-1980s, a time of “bulge” among school leavers. As a result the government has argued for a more restricted entry to universities especially, but to higher education generally, except in vocational, technical, and scientific courses, believing in the dictum of the International Bureau of Education (IBE, 1971) that “of all countries in the world, the smallest number of dissenting students are to be found in those which practise planning prior to selection.” It has, however, also recognized the need to retrain adults in work and is encouraging the PICKUP program, the open college, and new technology centers. As with the new INSET proposals, the courses offered are all of short duration.

Closely linked with the shape of higher education are the concepts of autonomy and accountability. How far should universities and polytechnics be accountable for their courses and actions to government, LEAs, students, and employers, especially in the light of political and employers' criticisms? The *Jarratt Report* (1985) is certainly of the view that there should be greater accountability, though how this should be expressed is less clear. However, how far should universities conform to state plans of government requirements, and how far should staff be free to stand back and be critical of society and the body politic? How far should government be allowed to intervene in the running of institutions and to influence the type, or even the content, of courses? Traditionally, those involved in higher education in the United Kingdom have felt that they have had a dual role, of cooperating with government through research councils and through academics servicing numerous government committees and councils, but at the same time they have seen part of their responsibility as standing back observing, researching into, and commenting on society and government policies as and when they have seen fit. Many sense that not only is such a position of autonomy in jeopardy, but they argue that because funding for higher education is largely from government sources, higher education academics should be more accountable for the use of those resources.

In the universities many academics believe that pressures for accountability have eroded institutional autonomy, and government intervention, even control, has been steadily increasing in recent years. A Parliamentary Report of 1972 had showed that "the UGC already exercises considerable control over universities' spending and is in fact operating in many areas in a way and to an extent comparable with that of a department of state." In fact the Report went on to say that "the control the UGC exercises over the allocation of university capital expenditure is quite as great as that of the DES in the public sector operating through the Secretary of State" (HMSO, 1972b). This control has grown enormously in recent years with the UGC forcing through rationalization, cutting waste, closing superfluous departments, and exercising punitive financial action against those universities which failed to observe UGC guidelines over student numbers. Perhaps the UGC action that has created more furore and anger than any other, however, was the attempt at judging individual departments on a national scale as "outstanding," "better than average," "above average," and "below average." Many have called into question the entire exercise, but the official publication in May 1986 of the UGC ratings of the various departments up and down the country, followed shortly afterward by the financial allocations for 1986/87 to the different universities, resulted in dismay and despondency throughout the university world. Many have also felt outraged at the judgments and have been at pains to prove the UGC wrong. A recent report by Lord Croham, if acted upon, might ease the relationships between the universities and the UGC and remove some of the anger felt by academics over the 1986 assessment exercise, for, while recognizing that "the UGC is not outside the machinery of government but part of it," Croham proposed that the UGC should become a council, not a committee, with greater independence but at the same time, with greater accountability to parliament, industry, and government. It is also proposed that it should have greater autonomy and a more clearly defined role, and that it should reconsider the existing structure of salary negotiations. It also argued that teaching as well as research should be taken into account in any future judgments on universities' performance (HMSO, 1987b). It is not yet clear how far the newly proposed UFC (HMSO, 1987a) will follow these recommendations. Indeed many academics view the proposals with grave misgivings.

Interestingly enough, the Oakes Report on public sector higher education (HMSO, 1978) sought to strike a happy balance between national needs and local provision, between central government and LEAs, while at the same time providing for governing bodies that are accountable to the public. Although the NAB and WAB were set up as coordinating bodies, their intervention has been far less noticeable than that of the UGC. It is perhaps this very lack of coordination and direction that has worried many polytechnic principals and has led central government to propose its new PCFC (DES, 1987c).

While academics across the binary divide have tried to fight back, arguing that accountability and efficiency are eroding basic academic freedoms, the fear is that since, as the permanent secretary at the DES once observed, universities no longer carry political weight in Westminster, the counterattack may be too little and too late.

Conclusions and Implications

This article tries to explore the changes and developments in higher education in the United Kingdom during the past two decades. If it ends on a pessimistic note, this is because the crisis of confidence in higher education has been deepening with alarming rapidity in the past few years. There are many who fear that the liberal traditions of United Kingdom higher education have been irretrievably undermined as a result of the growing politicization of staff and courses as well as from increasing government intervention. There are others, however, who regard the changes as inevitable and who view the prospects of marketing courses seeking greater efficiency in institutional management, developing new areas of knowledge, without in any way diminishing the standards of scholarship, as exciting and challenging.

That some form of higher education will continue is not questioned. What is questioned is whether its structure or its freedoms will be recognizable a decade from now. The system has not yet collapsed under the stresses and strains of the past decade, but the crisis of confidence in what is expected of higher educational institutions, especially the universities, has been deepening as the 1980s have progressed.

Other western societies whose higher education systems are faced with similar dilemmas of rising costs and dwindling resources, and with growing pressures from central government to go out into the marketplace to sell their wares, might do well to learn from the British experience. In some ways it is part of the Thatcherite experiment of the early 1980s in trying to make universities more responsive to the economic and technological needs of a modern industrial society. In some ways, however, it is simply part of a changing perception about the place of higher education in a modern society, whether it should be an arm of government or whether it should be free to criticize government policies without fear of political recriminations. Many of the issues and problems currently being faced in the United Kingdom are to be found in other societies. Whether their attempted solutions will be the same remains to be seen. One thing is certain, however: The pattern of higher education and the attitudes of academics, administrators, and politicians will be markedly different in the 1990s from those which prevailed the 1960s and 1970s, and certainly from the more genteel age of the 1950s. The crisis and conflict of the 1980s must, if nothing else, ensure this.

Notes

1. It is often forgotten that Scotland's four oldest universities, St. Andrews (1411), Glasgow (1451), Aberdeen (1494), Edinburgh (1583) predated all but a few Oxbridge colleges by nearly four centuries.
2. The civic universities, like Manchester, Liverpool, Leeds, Sheffield, Newcastle, were so called because of their close links with the new industrial cities. They are sometimes also called "red brick" because that was the major building material used.
3. Ulster Polytechnic was the first polytechnic to close when in 1984 it merged with the new University of Ulster. All the polytechnics are now in England.

References

- Alexander, R., & Whittaker, J. (1980). *Developments in PGCE courses*. Guildford, UK: Society for Research into Higher Education.
- Atkinson, G.B.J. (1983). *The economics of education*. London: Hodder and Stoughton.
- Bell, R., & Grant, N. (1977). *Patterns of education in the British Isles*. London: Allen and Unwin.
- Bereday, G.Z.F. (1973). *Universities for all*. San Francisco: Jossey-Bass.
- Chan, C.S. (1987). *Split degree programs in Malaysia*. Unpublished master's thesis, University of Reading.
- Committee of Vice Chancellors and Principals. (1985). *Report of the steering committee for efficiency studies in universities under the chairmanship of Sir Alex Jarratt*.
- Committee of Vice Chancellors and Principals. (1986). *The future of the universities*.
- Coombs, P.H. (1968). *The world educational crisis: A systems analysis*. Oxford University Press.
- Coombs, P.H. (1985). *The world crisis in education: The view from the eighties*. Oxford University Press.
- Cummings, W.K., Amano, I., & Kitamura, K. (1979). *Changes in the Japanese university: A comparative perspective*. Eastbourne, UK: Praegar Books.
- Dent, H.C. (1977). *The training of teachers in England and Wales 1800-1975*. London: Hodder and Stoughton.
- Department of Education and Science/HMSO. (1966). *A plan for polytechnics and other colleges*. Cmnd. 3006.
- Department of Education and Science/HMSO. (1973). Circular 7/73. *The development of higher education in the non-university sector*.
- Department of Education and Science/HMSO. (1976). *The development of higher education in the non-university sector*. In conjunction with the Advisory Council on the Supply and Training of Teachers, *Criteria for restructuring the teacher training system*.
- Department of Education and Science/HMSO. (1980). *PGCE in the public sector*.
- Department of Education and Science/HMSO. (1983a). *Teaching quality*.
- Department of Education and Science/HMSO. (1983b). *Teaching in schools: The content of initial training*.
- Department of Education and Science/HMSO. (1984). Report on education. No. 100. *Demand for higher education in Great Britain 1984-2000*.
- Department of Education and Science/HMSO. (1985a). *The educational system of England and Wales*.
- Department of Education and Science/HMSO. (1985b). *The development of higher education into the 1990s*. Cmnd. 9525.
- Department of Education and Science/HMSO. (1985c). *Better schools*. Cmnd. 9469.
- Department of Education and Science/HMSO. (1986). *New local education authority training grants*. Circular 6/86.
- Department of Education and Science/HMSO. (1987a). *Changes in structure and national planning for higher education universities funding council*.

- Department of Education and Science/HMSO. (1987b). *Contracts between the funding bodies and higher education institutions*.
- Department of Education and Science/HMSO. (1987c). *Changes in structure and national planning for higher education polytechnics and colleges sector*.
- Economist*. (1985, November). Understaffed and over-researched.
- Evans, K. (1985). *The development and structure of the English school system*. London: Hodder and Stoughton.
- Fenwick, K., & McBride, P. (1981). *The government of education*. Oxford: Martin Robertson.
- Ferguson, J. (1972). The Open University in Britain. In *World Yearbook of Education, 1972/73*. London: Evans.
- Fowler, G.T. (1972). The binary policy in England and Wales. In *World Yearbook of Education, 1972/73*. London: Evans.
- Gould, J. (1977). *The attack on higher education: Marxist and radical penetration*. London: Institute for the Study of Conflict.
- Grant, N. (1985). Higher education in the United States: Some possible lessons for the United Kingdom. In K. Watson & R. Wilson (Eds.), *Contemporary issues in comparative education*. London: Croom Helm.
- Hall, J. (1984). The centralist tendency. *Forum*, 28, i.
- Halls, W.D. (1985). A comparative political and sociological analysis of educational opportunity in Western Europe, 1960-1980. In K. Watson & R. Wilson (Eds.), *Contemporary issues in comparative education*. London: Croom Helm.
- Hencke, D. (1975, Autumn). Teacher supply: A case of manpower planning. *Higher Education Review*.
- Hencke, D. (1978). *Colleges in crisis: The reorganisation of teacher training 1971-77*. Harmondsworth, UK: Penguin.
- HMSO. (1944). *Report of departmental committee on teachers and youth leaders*. (McNair Report).
- HMSO. (1963). *Higher education*. Report of the committee appointed by the Prime Minister under the chairmanship of Lord Robbins, 1961-63. (Robbins Report). Cmnd. 2154.
- HMSO. (1966). *Higher education in the further education system*.
- HMSO. (1972a). *Teacher education and training*. (James Report).
- HMSO. (1972b). *Parliamentary report: Education*.
- HMSO. (1978). *Report of the working group on the management of higher education in the maintained sector*. (Oakes Report). Cmnd. 7130.
- HMSO. (1987a). *Higher education: Meeting the challenge*. Cmnd. 114.
- HMSO. (1987b). *Review of the university grants committee*. Report of a committee under the chairmanship of Lord Croham.
- International Bureau of Education. (1971). *Wastage: A world problem*. Geneva: UNESCO. Paris: UNESCO.
- Jarratt Committee Report*. (1985). Report of the steering committee for efficiency studies in universities.
- Jennings, R.E. (1977). *Education and politics—Policy making in local education authorities*. London: Batsford.
- Joseph, K. (1974, November 15). The pursuit of truth or relevance? *The Times Higher Education Supplement*.
- King, E.J. (1979). *Other schools and ours* (5th ed.). London: Holt, Rinehart & Winston.
- Kogan, M., & Kogan, D. (1983). *The attack on higher education*. London: Kogan Page.
- Mann, J. (1979). *Education*. London: Pitman.
- Neave, G. (1976). *Patterns of equality*. Slough, UK: NFER.
- Observer*. (1987, February 15). Polys rebel against the town halls.

- Organisation for Economic Cooperation and Developments. (1971). *Towards new structures of post secondary education*. Paris.
- Organisation for Economic Cooperation and Developments. (1975). *Educational development strategy in England and Wales*. Paris.
- Perkin, H.J. (1972). *A British university designed for the future: Lancaster*, *World yearbook of education 1972/1973*. London: Evans.
- Regan, D.E. (1977). *Local government and education*. London: Allen and Unwin.
- Scott, P. (1984). *The crisis of the university*. London: Croom Helm.
- Trevelyan, G.M. (1946). *English social history*. London: Longmans.
- Trow, M. (1979). *Elite and mass higher education: American models and European realities in national boards of universities and colleges*. Stockholm: Research into Higher Education.
- University Grants Committee. (1984). *A strategy for higher education into the 1990s*.
- Watson, K. (1982). Comparative education in British teacher education. In R. Goodings, M. Byram, & M. McPartland (Eds.), *Changing priorities in teacher education*. London: Croom Helm.
- Watson, K., & Williams, P. (1984). Comparative studies and international awareness in teacher education: The need for reappraisal. *Journal of Education for Teaching*, 10(3).
- Weiler, H. (1978). Education and development: From the age of innocence to the age of scepticism. *Comparative Education*, 14(3), 179-198.
- Williams, G., Kenyon, M., & Williams, L. (1987). *Readings in overseas student policy*. London: Overseas Students' Trust.
- Williams, P.R.C. (Ed.). (1981). *The overseas student questions: Studies for policy*. London: Overseas Students' Trust.
- Winterson, R.N. (1986). *The Joseph heritage: A view of Sir Keith Joseph's term of office and its influence upon the education service of England and Wales*. Unpublished master's thesis, University of Reading.

Intelligence: A View From Neuropsychology

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The measurement of children's intelligence has historically been based on a unitary conceptualization of intelligence. This unitary, general representation of children's thinking does not take into account the many different abilities and interests which children have. Unitary measures of intelligence also tend to be culturally and socioeconomically biased. Das and his associates have developed a multidimensional system for measuring intelligence. This system is based on Luria's neuropsychological model of brain functioning and emphasizes thought processes (basic coding, attention, and planning) rather than acquired knowledge. With this system, measurement is made of the different ways in which children organize their thinking and are able to sustain their attention and solve multistep problems. The use of this multidimensional cognitive assessment system in studies of children with learning difficulties and neurological problems has revealed that these children may have specific patterns of abilities associated with their difficulties. These studies have also suggested promising remediation procedures to be used with these different children. It is necessary, however, even with this multidimensional system, to take into account social and cultural factors in order to fully represent the intelligence of children.

Early research into intelligence was at best empirical, not rational. At worst, it was based on somebody's notion of what intelligence should comprise. Let me explain.

Around the turn of this century, a French psychologist, Binet, constructed an intelligence test. His purpose was simple: How to sort out schoolchildren who may have a weak ability for schoolwork so that such children can be helped. As years have passed, Binet's intelligence test has been used to hold back children, depriving them of quality education. Obviously, this is an abuse of an intelligence test. The test was revised for American children and is still being used. The fourth revision of Binet was published last year. Its original character has remained unchanged; it still provides a scale or only one dimension of merit on which children are placed, one general factor of intelligence. This is precisely its problem—should we rate children on one dimension, pronouncing some as low, some as medium, and some as high? There is little justification for doing this when we know that children have a variety of strengths and weaknesses.

Dr. Das received the annual University of Alberta Research Award in 1987. This article is based on his public address when accepting the award. He continues to serve as Director of the Developmental Disabilities Centre and as a professor of educational psychology.

What is wrong with placing everyone in one scale of merit? First of all, how does one determine what is meritorious, the one thing which is considered as meritorious? This itself becomes a problem because in any culture there are several indications of merit. Two of these relate to academic merit; these are the ability to grasp complex and abstract relationships. Even if we accept this narrow description of what is meritorious, and ignore such materialistic abilities as entrepreneurship, or spiritual ones such as the ability to achieve compassion and inner peace, we need to produce a commonly acceptable notion of what is abstract or what is to be regarded as complex. These narrow concepts too are subjective in each subculture. In the subculture of schools and colleges in our country, we may be able to find acceptable descriptions of these meritorious characteristics. Even then we will have a problem. The problem is brought about by previously acquired knowledge.

We need a good base of knowledge for abstraction and to grasp complex relationships. Knowledge is specific; for a physicist, what may be relatively concrete and simple is certainly difficult to conceptualize for a lay person without the knowledge of physics. Try to explain to a lay person Newton's three laws; he or she will find it to be quite abstract and complex. So we cannot do away with educational experience in testing for academic intelligence, and educational experiences can vary by fields of study as well as by opportunities for getting quality education.

When an IQ test like Binet's is given to schoolchildren, we ignore these variations and assume that all children have an equal interest in all fields or disciplines, and that they have had the same opportunity of acquiring that knowledge. Therefore, if children do poorly in the test, it is not regarded as an absence of knowledge; rather it is a proof of poor *ability*. This ability is *general*. We can already see why doing well in school is predicted by IQ.

The questions in the IQ tests require the child to know many things that are taught in school, and are "general knowledge" among his or her schoolmates. That is one of the main reasons why children's IQ and their school performance have a high degree of correspondence. Those who do not do well in school, or what is worse, those who cannot go to good schools, are the same children who usually fare poorly in IQ tests.

Because of such criticisms about intelligence tests, some researchers are looking at alternatives. Intelligence, they argue, has to do with how we process information, not so much *what* information we have. How we think when we have obtained information through our sense organs is the basic concern of intelligence. Thinking is the main function of the mind—this was suggested by logicians in ancient India who counted the mind as our sixth sense. As eyes have evolved to see, ears to hear, and so on, the mind has evolved as the organ of thinking.

If we agree that mental functions have a base in some structure, the most likely candidate for the structural base must be the brain. By studying the functions of the brain, and relating these to intellectual activities, we can learn a great deal about intelligence. Essentially, this is the approach to intelligence I have adopted. My students and I, and colleagues at the University of Alberta have been working on a model of understanding intelligence by mainly looking at what has been discovered by clinicians who have made insightful observations on patients suffering from injury to the brain, both to the top and the base of the brain. We ourselves have not done those clinical observations, but have depended heavily on the work of some outstanding clinicians.

Our major resource is the work of Luria, a Russian neuropsychologist, who practically created this new hybrid discipline. My first paper in this line of investigation in regard to intellectual or cognitive functions was published in 1972; in 1976 I obtained a Canada-USSR exchange fellowship to visit Professor Luria in Moscow. The model of intelligence which we have developed here at the University of Alberta is sometimes referred to by American researchers as the Luria-Das model (see Das, 1973; Das & Varnhagen, 1986, for details of the model).

Let me now give a brief description of the Luria-Das model; there will be more of Luria than Das because the background of the model has to be presented first.

The functions of the brain which relate to cognition are threefold. The front part of the brain is engaged in making plans, decisions, judgments, and evaluations. The back of the brain is responsible for analysis and synthesis of information and then for arranging information into a *simultaneous array* or in *sequential order*, as required. But information cannot be processed and plans cannot be made unless we are interested, attend to incoming information, and mobilize our attention to make plans and decisions. This basic function is at the base of the brain. The three functions are of course interrelated; they have to depend on each other because the brain acts as a whole. Mental activity is the total outcome of the brain functions, although we can distinguish its different parts.

To better understand how the three functions—arousal or attention, information coding, and planning—come together, let us consider an apparently simple activity: drawing a circle. A certain amount of arousal is necessary for the movement of drawing, and attention should be focused on the muscles which are involved in the movement. Without appropriate arousal and attention, I won't even begin to draw a circle. Next, I should be able to process the information obtained through sensory feedback as I am drawing the circle—Is it going in the right direction? Does it have the correct spatial orientation, and am I making the appropriate movements in the sequence? Finally, every voluntary movement requires a precise, stable plan. The regulation of arm, wrist, and finger movements to produce a circle involves planning. The frontal lobes of the brain are responsible for resulting movements. I have watched a physicist in Luria's clinic try to draw a circle; the physicist had a tumor removed from his frontal lobe. He held the pencil properly and he wanted to draw the circle, but what he produced was a set of random movements; then he finally gave up and was visibly embarrassed.

We have now constructed a number of tasks which would show how children and adults use their planning, attention, and information processing. With the help of these tasks, we have been able to examine learning disabled individuals who have difficulty in reading or arithmetic, in spite of normal or superior intelligence. We have also tried to understand the type of intellectual processes in which different groups of mentally retarded individuals may be deficient. We have begun to examine cognitive processing in special groups of medical cases such as those suffering from neurofibromatosis, multiple sclerosis, and so forth.

Examples of these tasks are given in the appendices. It will be clear that the task does not depend on school learning to a great extent, and that it tells us something about the processes used by different types of children in doing tasks. The first of the two tasks (see Appendix 1) requires that the child cross out those letter pairs which are identical, such as NN, TT, and so forth. We observe how long the child will take to finish the sheet of letter pairs. We also record how many pairs he or she missed. Usually, children above grade 1 do not make any errors. But in the next task (see Appendix 2), there are letter pairs which have the same name (Nn, Tt, etc.), but they do

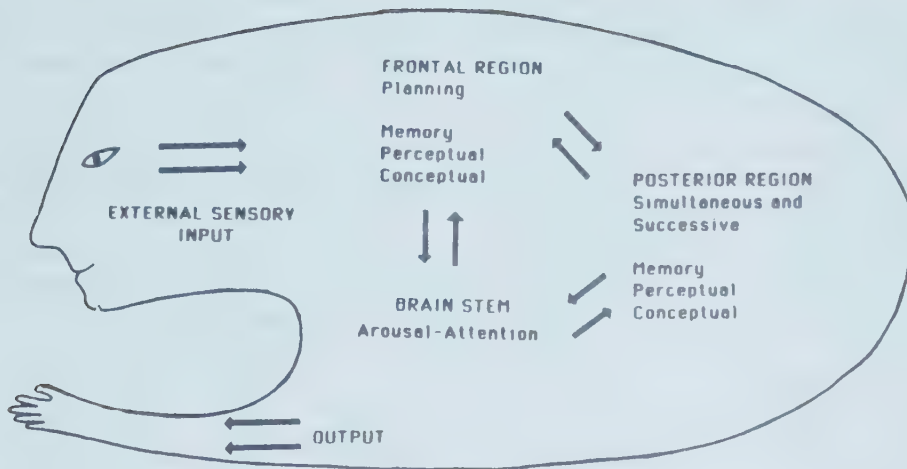


Figure 1: A Model for Information Integration

not look the same. We ask the child to cross out those pairs which have the *same name*. Children take longer to do this sheet and make more errors. Why does this happen? In crossing out letters of the same name, children have to process differently; they have to consult a dictionary of upper and lower case letters and their names. But this dictionary or lexicon is in their heads; they already have this knowledge. It just takes time to consult the lexicon, and it is a harder task than crossing out letters which look the same.

Are learning disabled children slower in both tasks, or only in the name-matching task? In a recent study we asked this question. The answer was a bit complicated. Learning disabled children who were only a little behind the class in reading, that is around one and a half or two years behind, were slower and missed more letter pairs than other children in the class in name-matching. They were as good as others in picking out identical letter pairs. Then we compared severely learning disabled children who were three or more years behind in reading. Many of them were true dyslexics. These children were slower even in the first task. They also appeared to be slower in encoding the identical letter pairs and recognizing them as the same. Note that in IQ, all three groups of children were average and did not differ. But in processing they did, and did so in a manner that made sense. We could not have such understanding of learning disability or dyslexia by giving the children a standard IQ test such as Binet's, because we could not have asked such interesting questions regarding their cognitive processing.

Our work with these special groups of individuals such as dyslexics will give us both a theoretical understanding of intellectual processes and a chance to apply the knowledge for ameliorating the disability. Not that one should automatically lead to the other, for understanding does not always result in cure or control. But there is the possibility. A neuropsychological view of intelligence is different from the existing psychometric tests of intelligence in trying to figure out how the mind works by anchoring its functions on the brain and by detecting dysfunctions. It does not seek to place people on a scale of merit, and therefore is not a tool for social selection. Although the elements of all cognitive processes must lie in biology, our mental functions have evolved in social cooperation. One of these obviously important functions is language, a uniquely cultural tool for thinking.

I conclude by saying that any attempt to predict the complex workings of the brain without due regard to the social and cultural conditions which not only provide a context, but also a reason, a necessity, for the brain to work, must be a mistake. But exactly that sort of mistake is being made by seeking one universal mental ability, for example, by giving reaction time tests for a trivial task such as *pressing a switch as soon as a particular light comes on*. Speed of reaction can be a universal characteristic of human beings, and such simple reaction times may be closely associated with a biological characteristic of the individual's nervous system. But this speed cannot be the *cause* of the differences in our various mental functions. Here I give an analogy. The biological elements which make up intelligent behaviors are like the alphabets.

t i e w h l r l t e b h i t e m r e e b e i m e o l i w t l t p a f r a e c p e a t r
e o m t e h e e t f t a h c a e t s y m o e u e t

They cannot accurately predict what words I, as an individual, may choose to make using those alphabets;

be be time time will will there there meet meet to to face faces a pre-
pare you that

and even when the words are given, how a poet may put these together creatively.

There will be time, there will be time to prepare a face to meet the
faces that you meet.

References

Das, J.P. (1973). Cultural deprivation and cognitive competence. In N.R. Ellis (Ed.), *International review of research in mental retardation* (Vol. 6). New York: Academic Press.

Das, J.P., & Varnhagen, C.K. (1986). Neuropsychological functioning and cognitive processing. In J.E. Obzrut & G.W. Hynd (Eds.), *Child neuropsychology, Vol. 1: Theory and research* (pp. 117-140). New York: Academic Press.

Appendix 1

Rn	Ae	Ta	Ae	RR	Nr	RA	NN	Rr	Te
Et	TT	AT	EE	Ar	EE	ER	Et	RR	RN
RE	TA	AT	Er	RR	Ae	Rt	Tn	AN	Nt
An	NR	RR	AA	En	TR	Ea	Ar	EE	Er
At	Re	NR	RA	EE	En	ET	Rn	Ra	Tn
RT	AN	Tn	Rn	EN	Rt	Ne	En	Ea	NN
Tn	Ne	Na	Na	TA	AA	Rt	Tr	RT	RE
Nr	NT	TT	Et	RN	Rt	Te	RR	An	Te
RR	NR	Ea	NN	TT	Ar	Na	TT	EE	EA
At	En	NT	RR	Nt	Ae	EE	NN	TN	Nr
Rt	ER	Ta	An	NE	AE	TN	NE	Nr	RN
TT	Ne	AA	Re	EN	Tr	Re	EN	An	Nt
Rn	NA	NN	AA	RT	Tr	NN	Te	Nt	RR
Ra	Ea	Ar	AA	NN	Er	NN	Ta	Nt	Ne
An	ET	TN	Rt	Ra	AN	NE	TE	AA	RE
TT	EE	Tr	Ra	AE	AT	Ne	Tn	Ea	TE
AA	Et	AR	Er	Na	AA	At	Ta	Re	ET
NN	Ra	EE	EE	Ae	EA	NA	Ar	AA	TT
En	Te	RR	Et	Er	RR	EE	TR	TE	AA
At	TT	NN	Ae	Nr	Re	TT	Ta	Na	TT

Appendix 2

Ae	RN	Ne	Et	RT	Re	EA	Rr	Ar	Aa
Ra	Rt	NR	Tn	Rr	Tt	NR	Rn	At	Ta
TA	Rr	NA	Rt	Tr	Ta	AE	NT	Er	AN
Ee	Tt	Te	Aa	Ne	Aa	Tn	AN	Ee	AT
Nn	Rr	An	Tt	Ar	Nt	EN	Re	Ra	TR
Rt	Ee	RA	At	Te	Aa	Rt	Tt	Nt	Ea
Ee	AN	En	TR	Tt	NE	An	NE	An	Et
Aa	Et	RA	Nt	Rn	AT	TN	Aa	EN	RN
Tt	Re	Nn	Re	ER	Rn	Rr	Ra	Ea	Ae
Ra	NE	Tn	An	Re	Ne	Ae	Er	EN	RT
Nt	Nn	Ee	Et	ER	Rr	TA	Aa	Rt	Nn
At	AT	TE	Te	En	Ne	Ea	Tr	Ra	Tr
Aa	EA	Tn	En	An	Rr	Er	Er	Rn	Rt
NT	Te	TN	ET	Nn	Tr	TE	Aa	Ar	Ee
Rr	Ar	Rr	AE	Nr	Ar	Na	RN	Ae	Tt
Na	Ee	TE	Ee	En	AT	ET	Te	Nn	Na
Nr	Aa	ET	Nn	Ea	Tt	Na	Ae	AR	RE
NA	Tr	Ta	Tt	Re	Ee	Nr	En	NR	Nn
Na	Tt	Rn	RE	Ta	Ee	Et	TN	Ne	Aa
Nr	Er	Nt	Rr	RT	Ta	Nn	Nr	Tn	Ea

BOOK REVIEWS

CURRICULUM: PERSPECTIVE, PARADIGM, AND POSSIBILITY. By William H. Schubert. New York: Macmillan, 1986, 478 pp.

Typically, synoptic textbooks of curriculum are so general in nature that they become dull, ritualistic manuals. With Schubert's book this definitely is not the case. *Curriculum: Perspective, Paradigm, and Possibility* is a work that provides a synopsis of the field of curriculum in a form that raises important questions for students of the discipline. For example, the field is conceptualized in broad epistemological terms, and thus fundamental questions of knowledge creation are central to the book. The point is made that without addressing these basic questions curriculum becomes an educational area without direction. Therefore, the purpose of the book is to raise such questions and thereby provide perspectives of the field as well as convey the dynamic nature of curriculum knowledge. Schubert stresses that the book does not provide pat answers to set questions; instead it provides the reader with a deeper, broader perspective of curriculum.

The book is structured in three parts as indicated in the title. An interesting technique that is part of this structure is the use of three fictional critics who react to the topic of each chapter. The critics are labeled intellectual traditionalist, social behaviorist, and experientialist. They play an adversarial role where each advocates a philosophical position, thereby supporting a particular curricular perspective and implicitly denouncing alternative perspectives.

The social behaviorist perspective reflects an empirical-analytic view of the world in which control, certainty, and predictability are primary concerns. Schubert's account of this perspective rings true, particularly for teachers and administrators. To a lesser degree it is true for some theoreticians in university curriculum departments. At present this perspective dominates the theory and practice of curriculum in Canadian education.

Part I provides five chapters which deal with perspectives of curriculum so that the reader is informed of factors that have shaped and directed the development of curriculum studies. Schubert handles the historical developments, contextual factors, basic assumptions, and the influence of stakeholders on curriculum in such a way that he addresses criticisms raised by earlier curriculum researchers. He clearly illustrates multiple branches to the historical roots of curriculum and argues convincingly for the role of history in the field. He further illustrates curriculum as a study that is energetic, alive, and in a healthy state. The vibrant nature of the field is demonstrated by alternative perspectives which reflect a questioning attitude about society and curriculum. This section of the book is of value as it provides a comprehensive summary of historical and contextual elements that are necessary for the understanding of recent developments in the field. In particular, the roots of North American curriculum are traced to developments in Great Britain, continental Europe, the United States, and Canada. These roots are pertinent to curriculum throughout Canada because of the

strong influence that commercial curriculum materials from the United States have had, and in many provinces still do have, on schooling. The discussion provides insights for scholars and professionals by providing foundations from which curricula may be interpreted.

Part II provides seven chapters on the three frames of reference, or conceptual lenses, that are used to question curriculum. The three frames of reference (empirical-analytic science, hermeneutic science, critical science), proposed by Habermas (1971), are used in the Kuhnian sense of a paradigm to provide a conceptual framework through which curriculum is perceived, investigated, and considered. From my perspective this section is the highlight of the book as it provides a structure that I have found useful with students of curriculum. A structure of this nature allows students to conceptualize different aspects of the field and come to an understanding of the relationships between curriculum and those factors Schubert discussed in his perspectives section.

A detailed examination of Ralph Tyler's four questions of purpose, content, organization, and evaluation are used as examples of the empirical-analytic mode. Subsequent chapters examine curriculum from the hermeneutic and critical sciences modes by considering the field as practical inquiry and critical praxis, respectively. Schubert identifies the theoretical work done by Ted Aoki and Max van Manen at the University of Alberta as being central to the development of critical praxis, or emancipatory theorizing. This approach is clearly in the area of a critical science paradigm where the dominant epistemological perspective in curriculum is highlighted and its assumptions are questioned.

For the reader who does not know the hermeneutic and critical science paradigms as well as he or she knows the Tylerian approach, Schubert offers succinct descriptions of the two paradigms and then proceeds to discuss the essential points by presenting the assumptions on which they are based. The discussions focus on the structure, questions posed, plus the implicit views of the paradigms. In addition, a description is offered of the reconceptualist's role in questioning curriculum from a critical science perspective. An assessment is made that suggests that these individuals have made a special contribution to the field because of the cultural and historical milieu of both themselves and curriculum. This is noticeable in Canada with contributions by individuals such as Ted Aoki, Max van Manen, Dieter Misgeld, and others associated with them. Their contributions have been the examination of curriculum from phenomenological and critical science perspectives, thus contributing to a different view of pedagogy.

Part III provides three chapters that examine the possibilities for curriculum. This section gives a range of response to the issues, questions, and points of view that are raised in the previous chapters. Schubert identifies 22 instructional and 15 societal problems that are facing curriculum. All 37 problems exist in Canadian education because Schubert has chosen to discuss problems that are general to Western societies. The only difference between Schubert's problems and similar lists for Canadian education would be the priority attached to certain issues. For example, concerns associated with science and high technology would be given a higher priority in Canadian education because of the recent initiative in this area by the Science Council of Canada.

The list of societal problems is disappointing because Schubert does not discuss them in detail. Questions of indoctrination as well as of control and coercion are at the heart of the critical science perspective, and a discussion of problems such as these would have permitted Schubert to illustrate the strength of viewing curriculum from

various paradigms. Schubert concludes the book by discussing ideals and practices to resolve these difficulties.

With any synoptic textbook the scope of the content is vast. In Schubert's book this is also true though he treats the material in a fair and balanced way such that the reader is not bludgeoned with a bias. This is not to say that a bias is not present. In my view Schubert tends to support the hermeneutic and critical science interpretation of the field, but this is not done at the expense of the empirical-analytic view. Schubert's interpretation appears related to a cultural bias which is revealed in two questions posed in the autobiographical preface. The first question is "What does it mean to live a good and fulfilling life?" while the second question is "What kind and quality of knowledge and experience enables a person to live a good and fulfilling life?" (p. viii). These questions, plus Schubert's account of why they are important to education, suggest a culturally influenced perspective of curriculum. Rather than viewing Schubert's bias negatively, we may commend him for providing the reader with a basis for the interpretation of curriculum that is promoted in the book.

Schubert's stated intentions are to provide a view of the curriculum field and to do it in such a way that educators are capable of effectively handling curriculum problems. Consequently, an assessment of the book's value to scholars and professionals must ask the question: Are the intentions fulfilled? The book does provide a comprehensive view of the field; therefore, the first intention is fulfilled. This aspect of the book will be of value to teachers, administrators, and graduate students who are unfamiliar with alternative perspectives of curriculum. For researchers and theoreticians who are familiar with curriculum paradigms the book will be of little value because it is a recapitulation of existing views. It does not provide new views, nor does it provide new interpretations of old views. Schubert's attempt to fulfill the second intention is found wanting. His method of fulfilling this latter purpose is to include a possibilities section and to pose provocative questions throughout the book. It is doubtful that these techniques will help scholars or professionals handle curriculum problems. The strength of the book is in the presentation of curriculum from a paradigmatic view. Thus the book will be of value to educators who are unfamiliar with alternative curriculum perspectives but who require an introduction to the field.

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Reference

Habermas, J. (1971). *Knowledge and human interest*. Boston: Beacon Press.

CLASSROOM ENVIRONMENT. By *B.J. Fraser*. Beckenham, Kent: Croom Helm, 1986, 226 pp.

Many new books in education are published each year. Some are texts; some are hand-books and guides; some are expositions of new theories; and still others are on specialized research topics which are concerned with the state-of-the-art review and synthesis and offer suggestions for future research and practice. This book belongs to the last category. However, it differs from other such books on specialized research topics in terms of scope, comprehensiveness, representativeness, detail, integration, and elaboration. After giving a brief summary of the book, this review offers a few comments on each of the differentiating characteristics of this work. However, because space is limited and I have a particular bias, these comments should be considered in conjunction with other reviews that might be published.

This book is the eighth in the Croom Helm Curriculum Policy and Research series edited by William A. Reid, University of Birmingham and Ian Westbury, University of Illinois. The Foreword by the editors reflects rather directly their philosophical and ideological orientation which is that curriculum consists not only of cognitive content and measurable outcomes but also of processes and the quality of life of students and teachers in their classrooms. Not many would argue with this sort of holistic position on curriculum and educational practice. But a debate ensues when one side argues that educational procedures and the quality of life in the classroom are means to cognitive achievements while the other side argues that procedures and classroom practices are ends in themselves. This book is neutral on this debate. It offers classroom environment measures as both independent and dependent variables as well as moderator variables of instructional treatment effects.

In seven chapters, the book covers the historical background of classroom environment measurement and research and contemporary research and practical issues. Specifically, in the first chapter, Introduction and Background, four perspectives which recur in other chapters are presented: (a) Approaches to the measurement of classroom environment in terms of perceptions of students and teachers are compared with direct observation of classroom procedures and practices and the relative advantages of perceptual assessment approaches to classroom environment; (b) Historical underpinnings of the contemporary conceptualization, measurement, and research of classroom environment; (c) The appropriateness of the distinction between school-level and classroom-level environment and approaches to the assessment of the school environment; and (d) The choice of the unit of analysis, among student, classroom, or school, in research work with various conceptual and statistical considerations.

The second chapter is intended to stimulate and advise researchers and practitioners on the use of classroom environment instruments. This objective is realized in this chapter by including comprehensive descriptive and validation statistics for five instruments of expected high use and applicability. Included for the high school level are the Learning Environment Inventory (LEI), the Classroom Environment Scale (CES), and the Individualized Classroom Environment Questionnaire (ICEQ); for the primary school level is the My Class Inventory (MCI); and for the college and university level is the College and University Classroom Environment Inventory (CUCEI). Also, descriptive and validation details are given on three short forms of the CES, ICEQ, and MCI. These short forms offer an attractive and practical alternative to measurement of classroom environments by fewer but more appropriate scales for research and practical uses. Besides these five scales in which Professor Fraser had a small or major interest in development, validation, and use in research, many other

instruments for measuring classroom environment are also discussed in this chapter.

A detailed and comprehensive discussion of associations between student outcomes and classroom environment scales is presented in two major parts of the third chapter. The first includes details of the design, analysis, and results of a correlational study by the author and his colleague. The second part, after providing an overview of the past outcome-environment association studies, gives reviews of research for the LEI, CES, ICEQ, MCI, and other instruments, under separate sections. The chapter concludes with a synthesis and the details of an extension of this research by Walberg, the originator of the LEI, into an educational productivity model.

In the fourth chapter, an overview of studies involving classroom environment measures as criterion variables is given. Presentation of this research begins with a tabulated list of studies under three organizing themes: curriculum evaluation studies, studies on differences between student and teacher perceptions of preferred and actual environment, and studies of classroom learning environment involving other independent variables. For each study the table identifies the classroom environment instrument and the independent variable under two separate headings. Then, under three separate sections, the tabulated studies are discussed briefly.

The material in chapter 5 is presented in two main parts. In the first previous research on person-environment fit (aptitude-treatment interaction) is reviewed and some common methodological flaws are pointed out. In the studies reviewed in this part, the environment measures used were generally either unidimensional or some single variable of interest to the researcher. In the second part details of a person-environment fit study, derived from two already published studies by the author and his collaborator, are given and it is assumed that regression surface analysis involving a single dependent variable would suffice in future research in overcoming the shortcomings of the previous research. However, the problem of confounding the multiple criterion variable set usually used in person-environment fit studies is not tackled by the regression surface analysis. We have to await the development of a methodological strategy to address the problem appropriately.

Chapter 6 addresses the applied problem of changing the classroom environment so that there is minimal discrepancy between the preferred and the actual environment of a classroom from both the teacher's and the student's perspectives. The author acknowledges that "surprisingly little has been done to help teachers assess and improve the environments of their classrooms" (p. 168). In order to encourage and facilitate applied work of this sort, this chapter provides a review of the related literature and then reports a couple of case studies where systematic strategies were used to change the perceived actual classroom environment so that the observed large discrepancy on the critical scales was reduced after the intervention period. Applied research is needed which can demonstrate both the effects of planned intervention on specific environment scales and the resultant side effects and transfer.

The last chapter entitled Conclusion is essentially a summary of the previous chapters and an extension in an effort to identify future avenues of research and applied work in the classroom environment. Although the scope of the book is classroom environment, it goes beyond that. It has included instruments and research pertaining to other milieus and contexts. This extension of the book is both logical and appropriate. Other environments and contexts offer parallel representations to the school and classroom contexts and much is to be gained, as demonstrated in this book, from going beyond the narrow domain of one's interest.

One could not help but be impressed by the comprehensiveness and representativeness of the coverage of the book. It presents the historical perspective

of the work on classroom environment to point out interesting distinctions between high and low inference measures of the classroom environment. The content of prior research on environments and related work is described in such a way that research workers in this area can use it profitably and save much time in library research. Hence this book is an important resource and offers interesting directions for future research and practical work. Details of a few of the author's own research and case studies provide methodological insights which might be of much use to novice researchers, and these instantiations of research could certainly be used by experienced researchers and teachers as examples for their students. However, there is one small ambiguity in the interpretation of regression results in chapter 3 when residuals of the outcome measure, after partialing out the ability and/or pretest differences, had been used as a dependent variable in the studies discussed in this chapter. This ought to be clarified. We cannot claim in such instances that classroom environment measures account for substantial or whatever amount of variance in the criterion above that accounted for by the pretest and/or ability measures. This can only be said in a stepwise regression situation. In the situation in point, we can only say that classroom environment measures accounted for such and such percent of variance in the residual dependent measure after the ability differences had been partialled out.

The book provides an excellent integration and elaboration of the research reviewed and discussed in it. Also, each chapter clearly outlines what it is about and then summarizes and extends in the concluding section of what has been discussed and what future work is needed to fill in the gaps. This, I am sure, is much appreciated by the readers. I am grateful for the excellent source that I have now available to me and I highly recommend this book to those who are interested in and are currently doing work in the area of environments in different milieus and contexts.

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THE EDITOR'S PAGE

Research Communication: Problems and Prospects

Changes in research communication arising from the use of technology will continue and are inevitable according to the *Report of the Task Force on Technology and Communication*. However, the change will not be so rapid as to be overwhelming, and the rate of adoption will vary by individuals and disciplines.

This state of affairs leads the task force to the view that those affected and involved will have time to address the important human, technological, economic, moral, ethical, and policy issues and concerns identified in the report. These range from cost-benefit and systems compatibility considerations to questions about the ownership of intellectual property, access to information, and quality control. The way such issues are resolved will determine the shape of things to come. A more immediate strategy for improving significantly the efficiency of the research communication process is also advocated. It involves focusing on cost-saving applications of technology as well as on the potential of technology to increase quality and productivity. Seventeen recommendations are offered to facilitate implementation of this strategy and resolution of the longer-term issues.

Of particular interest to researchers in education is the recommendation that SSHRC support *applied and policy-oriented research* concerning the use and impact of technology on research communication. An annual program budget of \$500,000 for five years is proposed for this purpose. A related recommendation calls for more encouragement of scholarly studies about the impact of new technology on the Canadian research community and on Canadian society in general. If implemented, these proposals would create opportunities for us to discover how to communicate more effectively with each other and with persons engaged in professional practice. More effective and efficient communication would also result from action by SSHRC on the recommendation that program regulations in all research support programs be amended appropriately to allow for purchase or rental of equipment (hardware and software) and for payment of on-line and connect charges associated with dissemination of interim findings or collaboration in the design and carrying out of research projects.

It is important that the strong support of the education community for at least these three recommendations of the task force remain visible in the months ahead. We must continue to articulate our interests through every channel possible, including using our connections with persons involved in the decision making structure, for persistence pays in the corridors of power and self.

W.H.W.

Second in a two-part series based on the *Report of the Task Force on Technology and Research Communication* (1987). Ottawa: Social Sciences and Humanities Research Council of Canada.

WALTER WERNER

University of British Columbia

Program Implementation and Experienced Time

Understanding the teacher's experience of time during program implementation is the purpose of this study. It is based on an analysis of interview transcripts from 20 primary grade female teachers in 15 schools across two adjacent urban districts in British Columbia. They were implementing a mandated reading program. The findings indicate that teachers experience various tensions between fixed-time (as defined by timelines, schedules, and the clock) and lived-time (as defined by their engagement with the task at hand). They attempt to resolve these tensions through their choice of when and how to initiate implementation; prioritizing their use of time and seeking extra time by means of short-changing other areas of the curriculum, integrating two or three subjects, and lengthening the workday; modifying the innovation by selectively using parts of it; interpreting current implementation difficulties in the context of the next time the innovation would be used; and by discussing problems of time with colleagues. The article not only illustrates time tensions and their resolution, but it also draws some implications for planning implementation projects and accompanying teacher inservice.

Our program implementation knowledge and strategies largely rest on common sense. As educators we share a body of belief about the purposes of schooling and about how schools work. Not surprisingly this consensus makes discussion about change possible and permits many things to be taken for granted when implementation is planned, evaluated, or even researched. Unfortunately, though, some of the fundamental categories of classroom life thereby may remain unquestioned, or when discussed, are at best glossed. Such is the case with *time*.

Implementation requires time to become familiar with the variety of materials that are available, how to apply them in your classroom, getting into the habit of using things that you haven't used before, and seeing whether they would be suitable. This takes time. (Teacher comment)

That implementation *takes time* seems terribly obvious, and perhaps for this reason the study of change from this perspective is not well developed. By definition implementation is "a process, not an event," says Fullan (1982, p. 41), and yet a "time perspective is one of the most neglected aspects of the implementation process" (p. 68). Reports on implementation often detail the amount and organization of time associated with projects and document how teachers need time for planning and learning to use innovations. Rarely, though, is the *meaning* of time considered from the point of view of the teacher's *experience* of change, and there is little discussion

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about the implications of this meaning for inservice. This lack is curious and somewhat surprising because implementation centers on the teacher.

Of course there are various conceptions of program implementation (House, 1981; Loucks & Lieberman, 1983). But for purposes of this article I am adopting Fullan's premise that there are both subjective and objective dimensions to a teacher's experience of change. Much is written on the multivariate and objective dimension (such as identifying those factors and procedures that enhance implementation planning), whereas less attention is given to the subjective meaning of change: "Neglect of the phenomenology of change—that is, how people actually experience change as distinct from how it might have been intended—is at the heart of the spectacular lack of success of most social reforms" (Fullan, 1982, p. 4). Perhaps part of the reason for this neglect lies in Fullan's further observation that

we have become so accustomed to the presence of change that we rarely stop and think what change really means as we are experiencing it at the personal level. More important, we almost never stop to think what it means for those others around us who might be in change situations. (p. 24)

Understanding change from the point of view of the teacher's experience leads one directly to the topic of time (Fullan, 1982; Lieberman & Miller, 1984; Lortie, 1975; Sarason, 1971; Wolcott, 1977).

My purpose here is to argue that the teacher's experience of program implementation needs to be considered from at least two time frames.¹ Inevitable tensions between the frames define the meaning of time for teachers during program change, and bringing about some kind of resolution is a feature of their accomplishing implementation. This argument is illustrated with data taken from a 1981 study of teachers implementing a new reading program (Pike, 1981).

Method

Participating in the study were 20 full-time primary grade teachers (female) in 15 schools across two adjacent urban districts in British Columbia. They were implementing the *Reading 720 Program* (Ginn & Company, 1979) for the first time. This innovation is a commercially produced and self-contained package consisting of rather prescriptive teacher guidebooks, student texts and workbooks, and various other instructional and assessment materials. The sequenced lessons and directions for evaluation are explicit. It was mandated by the school districts and followed up by two district-wide inservice sessions conducted by district curriculum consultants. Some schools provided teachers with professional development time every two months for preparing and sharing student materials. Also, the district consultants were available to help individual teachers with their implementation planning and problems.

The teachers were recommended by two curriculum consultants in each district whose responsibility it was to provide the inservice training and to work with teachers on this new program. (This method of teacher selection was a condition set by the school districts for doing the study.) These identified teachers agreed to be interviewed at least three times for a total of up

to two and one half hours each during the last three months of the school year. There were no group interviews. These selection criteria meant that the interviewees had certain characteristics in common. They were viewed favorably by the district consultants as having an ability to reflect on and articulate clearly their experiences, concerns, and problems with the implementation and were not perceived to be those who resisted the change. They were a select group and did not represent the range of teacher characteristics and attitudes that might be expected in any large school district.

Because the purpose of the interviews was to clarify the meaning that teachers gave to their own experiences of program change, the teachers' points of view were highlighted and respected in the data collection and analysis. Thus the study did not begin with an assumption that time was (or ought to be) a major theme in implementation. Rather than starting with a fixed hypothesis, the research began with open-ended questions that could become focused more narrowly in later interviews. These questions were suggested by a review of selected phenomenological writings (Greene, 1973; James, 1904; Schutz, 1970, 1975) concerning how we experience change in our everyday world, and by literature that purported to discuss program change from the teachers' view (Lortie, 1975; Ponder & Doyle, 1978; Sarason, 1971; Wolcott, 1977). Four categories of questions were devised to guide the initial interviews: (a) What were your *anticipations* of the change experience, and how did these anticipations match your actual experience? (b) What *factors* (e.g., events, sources of help, decisions, expectations, and people) both inside and outside your classroom influenced your experience of change? (c) What *problems* or difficulties characterized your experience, and how were they dealt with? (d) Was there anything else that *you* considered important to your experience of change? The point of starting with general categories was to allow the teachers freedom to define their own experiences in terms of what they considered to be salient. This format provided scope for discussion in order to produce a transcript which could then be used for more specific questioning in follow-up interviews. All questions and the conversational style were piloted with three teachers who were not a part of the study group, but who were undergoing the same program change. Their taped comments helped to clarify and ensure that the questions would be relevant to teachers undergoing the implementation. All interviews were conducted by a primary school teacher who was doing graduate studies in program implementation; she had not used this innovation and so did not bring to the interviews preconceptions based on any experience with it.²

Fourteen of the 20 teachers (seven from each school district) were randomly selected to be interviewed individually. Two weeks prior to this interview each of them was mailed a copy of the questions and was told that the purpose of the study was to make explicit the meaning that she gave to her own experiences of change. Any questions they had about the study were discussed. Because each of them had given thought to what she wanted to say, there was no difficulty focusing on the topic during the taped interview of up to 45 minutes that was conducted in their schools. Each one was

asked to elaborate comments that lacked detail and to clarify statements that seemed ambiguous. The tapes were subsequently transcribed.

A second interview of up to one hour was conducted with these 14 teachers individually after a couple of weeks. Each was asked to read her transcript of the first interview and to reflect on its adequacy, to make any changes to the text if she so wished, and to provide any further clarification and information that she desired. The reason for this procedure was that they may have reconsidered what they said during the first interview or may have thought about something new that was important to add. By reading her own words, a participant could judge whether the text communicated what she wanted to say. Each one thus controlled her own transcript and enhanced its validity from her own point of view. At the same time any data which were not clear to the interviewer could be probed further and mutually clarified. When these modifications and elaborations were recorded the 14 transcripts were ready for a first analysis.

The analysis began as the transcripts were read by both the interviewer and researcher in the light of the question: What common themes characterize these experiences of program implementation? Themes referred to those features of the change experience that all of the interviewees highlighted. (Shared rather than idiosyncratic themes were sought because producing 14 case studies was not the purpose of this study.) Within each transcript the themes were identified and then compared across the transcripts. In this way six common themes were defined. Experiences of change were influenced by: (a) discussions with colleagues, (b) student responses to the new program, (c) the quality of various kinds of district and school support, (d) teacher beliefs about the classroom and the subject matter, (e) the nature of daily classroom planning and activities, and (f) time. They all spoke of the organization of time as being problematic during program change.

The third taped interview of up to 45 minutes allowed the 14 teachers to respond individually to a written summary of the six themes, together with supporting examples from the transcripts and an explanation for how they were defined. Because the themes were abstractions from the transcripts, each participant was given an opportunity to question and further discuss them. At this point the remaining six teachers (from one of the districts) who were not involved in the first two data gathering interviews were now interviewed individually to seek confirmation of the themes. They were asked to discuss and to judge whether these themes adequately interpreted their own implementation experiences. This provided a further check on the study's intention to take seriously the teachers' perceptions. Validity in the study thus depended on all 20 teachers being given the opportunity to recognize and clarify their experiences in the themes (Psathas, 1973; Werner & Rothe, 1980). The interest was in their experiences rather than in a fictional world of the researcher's own making. In this manner the participants highlighted time as a major problem characterizing their attempts to use the innovation.

Confident that time was central to their experience of implementation, the researcher then analyzed the transcripts in greater depth to determine why time was perceived to be problematic. For purposes of this analysis, time was defined as one's "sense of duration" from the point of view of two frames: fixed-time and lived-time (Greene, 1973; James, 1904; Schutz, 1970). These frames were brought from the literature to the data, and the analysis focused on the experienced tensions between these frames and their mediation in the teachers' work. The categories of "tension" and "mediation" were in part an artifact of bringing the two frames to every reference to time in the transcripts. The questions that guided the analysis were (a) What tensions did teachers experience between fixed-time and lived-time? (b) In what ways did they attempt to resolve the tensions? These questions allowed for some insight into the experience of program implementation from the perspective of time.

Time Frames

The first frame has been called *fixed-time, public-time, or objective-time*. Here our experience of time is organized by fixed reference points that give it an objective reality external to the individual. Our sense of the past, present, and future is rendered public and orderly through calendar-time, clock-time, timetables, timelines, schedules, target dates, and deadlines. These categories allow us to standardize our experiences, to synchronize plans with other people, to provide a basis for evaluating the efficiency of what we do, and to make our activities accountable. No one is immune to these effects, as illustrated by Ott's (1980) analysis of the clock within our lives:

Among the essential features of clock-time are sameness; repetition; the ordering of experience into chronological slots of past, present, and future; and finitude. The present is conceived as a quickly moving dot measured in micro-seconds which speeds up as the dissections of the movement become increasingly finer.... Clock-time encloses. It is the standard reference for activity. It prevents one from moving too fast or too slowly.... Besides encouraging sameness, clock-time orders experiences into a neat recordable structure. It spans its whole realm with a serialization of minutes, hours, days, and years. Each moment of the past, present and future is thereby made amenable. No moment escapes. (pp. 59-60)

Fixed-time is integral to one's experience of change and is the very basis of planning. It is particularly the point of view of the curriculum developer who may be responsible for initiating change and of administrators who conceive implementation along timelines and think of successive stages or levels of program use (Leithwood, 1982). Those who manage change across a school district, for example, may decide to initiate implementation on September 3, to schedule a three-hour teacher inservice session on October 10, another on January 7, and then to allocate resources and anticipate certain kinds of outcomes. If there are difficulties with implementation, fixed-time is adjusted administratively on the assumption that flexibility means the compressing or lengthening of timelines as necessary. This manipulation of time provides benchmarks for judging the success of implementation, and for the teacher defines expectations about covering a certain amount of

material by a given time. Teachers, fully aware of the difficulties inherent in using someone else's prescription in their classrooms, recognize the inevitable pressures of time restrictions. Precise and invariant units, such as an 80-minute class period, a two-hour preparation session, or a four-day unit of study, while making the measurement of time possible, define important constraints on learning and teaching. Quite simply, fixed-time is recognized as an important variable in the planned success of program change. But the experience of time goes beyond the bounds of this frame.

The second frame can be called *lived-time* or *subjective-time*. Both James (1904) and Schutz (1970, 1975) compare our sense of "inner duration" with the flow of a river; it moves through consciousness, not with the routine regularity and evenness measured by minutes and hours, but with a continuous flux that defines the ever-present Now.

Within this frame, time has an amazing elasticity. We speak metaphorically of time that drags, crawls, flies, slips away, rushes along, stretches, and is consumed, as Langeveld (van Manen, 1978) illustrates so well in the child's encounter with the school clock:

The clock of the adults says: "It is five minutes past nine!" The child looks at the clock reproachfully. As a child you can grimace at the clock because the latter is no longer an indifferent object. The clock is telling you that things are going wrong. It says: "you are going to be late." Suddenly the life of the present turns thin and pauperish; the child is at wits' end. He is now in the fourth dimension of "being late." Will he get punishment? Time stretches, stretches, stretches until the school principal, the god of time, says "All right then—go to your class...." Suddenly we are back in ordinary life; the experience of the present opens up to the horizon again; the strangeness of the class which had begun to work already is quickly overcome and we are industrious and well-behaved. The morning goes by fast. The clock cooperates, the hands don't get stuck on the face of the clock. It is continuously "so late already," that is, "it is later already than I thought it would be." (p. 54)

Depending on one's immediate projects and interests, temporality has a variability that moves unevenly along many dimensions, such as slow or fast, routine or pressing, stretched or compressed, closed or open, full of anticipation or full of dread. When one is bored, time plods along so slowly; what seems to be 15 minutes is, according to the clock, merely three minutes. An hour slips away quickly or becomes dreadfully long, depending on how fully engaged one is with the task at hand. There is never enough time when one feels pressed by a deadline. When in a hurry, waiting for a bus seems like forever. In short, one's subjective experience is of the ebb and flow of time.

Greene (1973) says,

Each person is to some degree aware of an inner time which differs from clock time, the intersubjectively accepted time of everyday reality. The person must adapt to standard time sequences throughout his life, but these sequences are never completely syntonic with the levels of inner temporality. (p. 134)

Herein lies the tension between the two frames during program implementation, as illustrated by the teachers' experiences described in the next section of this paper.

Tensions

I am in a time squeeze, having to make decisions quickly. I feel apprehensive and even hopeless because there is so much to learn in a short time. I'm just one step ahead of the kids. But we only have so much time. I can't seem to get organized. I feel pressed. I'm just too busy to do everything I should. There is a lot happening in a very short time.

Implementation does bring out tensions between fixed-time and lived-time. The teacher has a foot firmly in these two frames, and it is within this stance that much of the frustration is located with implementing change. He or she works within the fixed-time parameters defined by the institution and the lived-time experiences of the participants. The events and social world of classrooms are organized around the clock and the seasons of semesters and days. And yet it is easy to forget that change is not accomplished over cumulative bits and pieces of clock-time, nor is it brought to fruition through an hour here and there across some months. There are times, rather, of immersion during teaching or planning when ideas come like a flood and insights flow within a few minutes, and other times when the program seems to move so slowly as to lose its very meaning. Understanding a new program requires the teacher literally to dwell in it for intensive periods without constant interruption from other demands. The tyranny of clock-time can run interference and play havoc with this pacing in a number of ways.

First, an obvious tension with fixed-time has its source in the innovation itself. Program documents and the strategies for their implementation, together with the school's organization, assume a notion of time that is objective, rationalized, and administrative in interest. As such, implementation is shaped by objective-time, not only as measured by the classroom clock, but also by the structure of the new program. Its lessons have an internal sequence in relation to each other, thus specifying for the teacher the correct order of events and how much emphasis is to be given them. This sequencing of topics or objectives may imply a step-by-step process of what to teach and when, and sometimes explicitly suggests the relative amount of time allocated to topics. Although materials have their own logic that holds them together from the viewpoint of their developers, a teacher may judge that it is not always possible or desirable to follow this structure within the constraints of the classroom. The resultant tension for the teacher is expressed typically as *I feel guilty because I have not gotten into the program in as orderly a way as it suggests*. The chronological serialing of teaching activities may be in conflict with the way one's classroom events unfold; the plan is never the experience. Depending on how this perceived tension is experienced, it may generate a sense of lost control over one's own time, and may produce considerable frustration and even some disorientation. In essence, this frustration occurs as lived-time is brought to focal awareness and when fixed-time can no longer be taken for granted in relation to changes in one's classroom routines.

Second, another tension with fixed-time has its source in perceived program demands. The dilemma, as one person expressed it, is that *there is*

so much suggested in the program for me to do, but the time disappears on me, and I don't have enough time to do everything that I want to do. The teacher is overwhelmed with the sheer amount of things that could be done because of perceived program demands that need to be articulated within the overall school curriculum and in relation to the ever-present timetable. Such tension is expressed as astonishment, frustration, and a sense of contradiction:

When I saw the teacher's manual and all the types of things that a teacher could do, I was really quite astonished; I thought that "If I have seven days a week and 15 hours a day, I can do it."

Similarly, another teacher commented that

There were so many aspects of the program that I could see, and initially the problem was that of getting bogged down when I felt I had to cover everything ... I was frustrated because there was so much to do in the program and the day wasn't long enough.

Faced with a discrepancy between how much time seems to be required and what amount is available, all participants experienced duration with feelings of being pressed, burdened, and overloaded. When there is not enough time one's sense of inner duration moves unevenly. Each new classroom activity is experienced with uncertainty because previous routines can no longer be taken for granted. One does not know "how long" an activity may take and "how much" time may be necessary to use unfamiliar materials. This confusion erodes a sense of smooth flow and reduces classroom life to a series of halting and even disjointed episodes. Until the program is taught once through, there may be little understanding of what its components entail for one's work.

This frustration with the structure and demands of a program is felt especially during one's early attempts at implementation. This is when time moves unevenly because of the sheer amount of things to be learned and done, and the uncertainty in pacing lessons:

There were times in the beginning—in the first few months—when I felt a tremendous amount of change happening. I was just ahead of the kids. Now it's coming better because I know what to expect and what is coming, but at that time I bogged down and needed more planning time.

For participants this initial time is experienced and managed through "working slowly":

I find that I am working quite slowly and that I really don't have the time to do the phonics and get through the reading and mastery tests.... I went very slowly through the first book and developed it slowly. I'm not worried but I'm still going slow.... I'm going to speed up a little later as I become more familiar with the program. I'm hoping things are going to click and that we can then rush ahead.

Working slowly in the classroom is the result of trying to simultaneously grasp what a program involves, sorting out doubts about how it may best be used, and trying to do an adequate job under such circumstances.

Third, it is not surprising that over the course of a teacher's attempt to use a new program there is a heightened awareness of time and its variable

tempo. This tempo recognizably shifts as one's experience with the new program accumulates. Before starting to implement, said one teacher, there was anticipation and a rationalizing of what *future time* would be like:

I saw myself initially taking some time to change habits and to get into using some of the material that I hadn't used before; I thought that initially this would take time but that it would soon become a part of my way of doing things.

Once implementation is started, however, the initial experience involves considerable uncertainty:

I was undergoing the greatest amount of change in the beginning of the year ... when it was brand new for me; that was the hardest time. I had so much work to do and I seemed to be working one story ahead of the children. I had the feeling that I didn't know where I was going.

But as participants gain familiarity with the program and use it with a greater sense of competence, they report a noticeable shift with experienced duration: *I find that the time seems to be moving along more quickly than when I first started using the program two and a half months ago.* There is the move from acute awareness of time (*I worked at my new materials all the time; just trying to familiarize myself with the program took time*) to the place where the same teacher says *I feel fairly comfortable with time now that I've worked with the materials for a few months.* Gradually time is no longer highlighted as classroom routines are established once again: *Having gone over the program, I am now familiar with its goals and I feel that I know where I'm going with it.* And as to the future there is the rather sober prediction that *after we have used it for three or four years, the program may become such a dull routine that we lose our enthusiasm.*

A fourth tension arises as the present is interpreted in the light of the past, and when the perceived success of one's current teaching is compared to last year "at this time." In the following comments time is brought to the fore clearly in relation to "the time before":

Classroom management ... is very time consuming and I'm not getting the same kinds of results with students that I had in the past by this time of year. I feel terribly bogged down.

I felt frustrated around Christmas because I knew from past experience what the children had been able to do by this time and now I wasn't perceiving the same progress.

Parents are also a source of comparing the present with the past, as one teacher discovered:

I had parents comparing their child's progress in grade one with that of a child who had been in grade one last year, and saying "My goodness, by December my Johnny was reading all kinds of things, and this year my Tommy doesn't seem to be learning to read very well"; I remind them that we are using a new program and it goes much more slowly.

These comparisons with the "last time" are tied to parents' and teachers' expectations of children's progress; only as they see explicit student benefit is the time spent on the innovation deemed worthwhile despite the frustrations. Time becomes oppressive when its enormous investment in im-

plementation activities does not seem to have the expected pay-off in student learning:

My preparation was very time consuming and I was trying to rush in the classroom. I slowed down because the students weren't reading as quickly as with the former program. I felt we were wasting time because the new program wasn't working as the old program had in the past, and student progress didn't appear to be as good as in the past.

Because the demands of fixed-time are rarely synchronized very well with inner-time, the quality of implementation itself may be affected when there is considerable tension between the frames. On the negative side the tension may shape adversely the teacher's relations with the students, and modification of significant classroom values may occur. Implementation may then take place around the constraints of fixed-time more than around questions of purpose. For example, as one interviewee concluded, *I found that I couldn't offer the children enough time in the day, and I didn't have the time to do as much as I would have liked ... or to develop any of the enrichment ideas.* Positively this tension reminds teachers that they are not the only ones who experience time pressures; so do the children in the schools. Recognition of this mutual experience provides an opportunity for teachers to discuss with students the difficulties associated with change. For both teachers and students, mediation of their immediate time tensions is a part of achieving program implementation. The following section of this paper illustrates how teachers do bring resolution to this problem.

Mediation

I didn't feel comfortable with the program right away because for all of us it's been a learning process as the year has gone on. We are working with things that are brand new. Preparing those materials, reading the stories and keeping ahead of the children in the book, all in a space of a year, that in itself is a challenge.

Mediating tensions becomes a feature of program implementation for teachers. At one extreme are those who downplay the pressure of fixed-time: *The time is mine and I decide what to do with it.* On the other side, some teachers feel a loss of time control and admit a need for help to establish once again a sense of instructional sequence: *I'd like something programmed in steps and stages.* Somewhere between these extremes, however, are various ways to mediate disjunctures between the time frames.

Initially teachers come to terms with the demands of fixed-time through their choice of when to initiate implementation. Even though a district makes the decision to adopt the innovation, this does not imply that teachers are implementing that decision immediately in their own classrooms. Timing one's *entry* requires decisions about when and how to use a new program. For example, some teachers delay entry up to three or four months to ensure adequate preparation time, the availability of necessary materials, and more importantly, to watch what colleagues are doing and to learn from the problems they encounter. This strategy of "wait and see" allows them to grasp more fully what the change means in practice and to an-

ticipate classroom modification through better planning. While waiting, the following respondent used this lead time to teach students some of the things she assumed were related to the innovation:

I refused to start until the program was organized and all the materials were available. I'd made a conscious decision about when I'd begin the program and I didn't start the program until November.... I didn't even start looking at it until then. There were things I wanted to do first with the children in the way of research skills, outlining, paragraph writing, and so forth.

In contrast to this delayed entry, other teachers try to use the program fully from the beginning of the school year, believing that the best way to implement is to jump into the change immediately: *I think I was the only one in the whole school that started right away with the program in September; the materials were here so I started right in.* They do this knowing full well that there would be initial confusion as they muddle through the program and that the time demands would be intense. Immersed in the change they find, as expected, that there is never enough time to do everything that seems necessary, but they expect that as time goes on they will achieve a greater sense of stability:

In September I completely changed over the way I did things in the reading program.... When I first started using the program, it was a great change that put much pressure and strain on me, having to make a whole new set of materials.... I really worked a long time and was floundering a little.... There was exasperation at the beginning when I had to get things rolling so quickly with decisions regarding materials.

Others are more cautious, starting gradually with the new program and making decisions along the way about what aspects of the innovation would be used. Over the course of a few months or the school year they phase in implementation by dealing with change incrementally, thereby bringing the two time frames into closer harmony. For example,

I haven't really delved into the program deeply in the sense of having gone through and followed all of its facets. I've used parts and others I haven't because there are so many different elements involved, because of my lack of energy, and because some of the things in the program I haven't liked that well nor been convinced that they are that great. I've chosen not to do those things. In the future I will get into the program more deeply, but right now I'm holding back. There are other things that take my time.... I'm taking it slow and easy instead of getting in a hurry or dashing right into it, partially because I felt that the way I was doing things was adequate.

This decision to implement slowly may be made by an individual for his or her own reasons quite independently of what peers are doing in the school or across the district. On the other hand a group of teachers may collectively choose (or have the choice made for them) to work together on a common timeline for phasing into the program:

We (at the school) didn't initially adopt the whole program.... We are doing implementation sequentially over a longer timeline. When we are finished, each teacher will have a complete packet of information and teaching helps. We have gone through the program slowly.

The point illustrated by these examples is that teachers mediate time tensions somewhat differently through defining entry time. No one of these entry procedures is necessarily better or worse, except that this variation

may conflict with the fixed-time of administrative timelines. When implementation is administered only from the perspective of objective-time, standardization of entry is assumed as well as the illusion that teachers experience time in the same way within their classrooms. Neglected is the evidence that they may deal with time in dissimilar ways.

There is a second avenue through which time tensions are mediated. When faced with not enough time, teachers prioritize their use of time and seek “extra time” in a combination of ways. Commonly more time is found by short-changing other areas of the school curriculum: *I cut down the time used for science, social studies, and music; for these subjects I spend minimal time on the basics.* The time taken from these subject areas is used then for planning and teaching the new program. On the other hand, rather than set up competition for time among subject areas, some teachers seek more efficient use of time by “integrating” two or three subjects:

At first the program was totally new and I was spending time on it, and this was affecting my other areas of the curriculum. It was taking the time away from developing these other areas. I tried several different approaches to integrate the other areas in this new program but I wasn't satisfied—I was doing a hit-and-miss job. Also, the children were used to blocks of time—this is reading, this is language, this is spelling, and so forth—and they would ask “when do we do language?” Because the language and reading were integrated the children were not recognizing it as language.

However, as this quotation indicates, this option proves to be a difficult one (for students also) during the first year of implementation, for if integration is to occur the new program has to be understood in a way that comes through actual use. When using the program the second time the teacher has the kind of familiarity that allows for adaptation of goals and lesson sequencing in the light of other subjects and student needs. For all teachers, of course, extra time necessary for planning is also to be found outside the bounds of the school timetable:

The only way I can survive is to take the materials home over the weekends ... I take three or four hours on the weekend to really know my work, then during the week I can adjust the program because I have that preparation behind me.

Timing one's entry and seeking extra time are accompanied by adjustments to the innovation itself. Though initially overwhelmed when faced with an entire program, teachers become selective about what materials would be used with children and when. They quickly prioritize their own implementation activities, and this is perhaps the most important way of dealing with time when all perceived demands cannot be satisfied at once. The following quotation highlights this form of time management:

Time was a really big factor when I was beginning the program, not just time in the classroom, but my own preparation time. The amount of time I used to prepare was phenomenal. Now I'm not spending as much time as I did at first; I'm learning to pick and choose what I'm going to do instead of trying to cover everything at this particular time.... The program started going more quickly because I was not trying to do all of it. There was a little more speed and flexibility in my program as I learned about it. We started clicking along instead of being stodgy and thinking that I've got to get through this and that. I relaxed and that made everything go better.

The grounds for selective implementation and for prioritizing the use of classroom time are related to student reaction to the materials and their perceived effectiveness for student benefit, the ready availability of resources, and the teacher's beliefs about what "works" and what does not. For example,

I choose not to cover all of the material because of time. My past experience and the time available to me guided by selection, and the fact that I know what I want to cover by the end of the year.

There are things that you can spend a great deal of time on if you are not careful. Decisions have to be made about how to spend time and you have to be very selective in the materials you use. For example, I don't think I should be spending a lot of time doing vocabulary drill work with the children; those things can be cut out. I spend time on discussion of the stories.

However, it is difficult to prioritize until one has some familiarity with the innovation that comes with actually using it, despite one's initial doubts about its benefits for classroom practice. Increasing familiarity with one's students over the course of a year becomes a basis for pedagogical decisions about what will be done, when, and how:

At the beginning I thought, "Oh my goodness, will I be able to cover all the material as thoroughly as I want to?" I'm now at the stage where I feel more comfortable with the program; I'm more selective in what is important for the children at this time because I know my children better now than I did in September. I have more confidence with what I know that they can do and can't do, and what they need most. Initially I looked at the program like the beginning teacher who wants to do a good job and thinks "I must do everything, every page, and make sure that they have been covered thoroughly." But when you get more confidence in what the children know, you feel more comfortable leaving things out, not in a haphazard fashion, but because you know your children well.

Fourth, the tension is mediated also in part through a sense of the future. The teacher experiences the present in terms of the immediate past and what he or she anticipates of the future. They see "this" instructional activity in the light of "those" other activities already completed or yet to come. On the basis of past experience, anticipations are formed about "when I do this again," with attendant feelings of hope and greater control: *Next year I'll supplement with other materials and be able to do more; I've just taken each day as it comes and prepared what I needed for my next day.* This notion of "next year" holds promise when compared with the present, but this promise is not the same for all teachers. Some are certain about the promise (*Next year I will use all aspects of the program ... I will feel comfortable using it next year after I've thoroughly familiarized myself with the materials that I have at hand now*), whereas for others their hope is couched tentatively (*Maybe it will be better next year; I may get better results.... The next year around perhaps things will be a little smoother*). For everyone such talk of "the next time" is a recognition that although the past may not have gone well, the future has open horizons and some optimism is thereby possible.

Lastly, the tension is mediated as teachers come together and through discussion develop a sense of *intersubjective time* that cuts across the

variances of personal inner-time, thereby forming a basis for the shared Now. By means of reflection that comes through dialogue, they synchronize their experiences to some degree and give them a more or less common interpretation. Implementation is facilitated in various ways by such talk, not the least being that it obviously provides immediate comfort value as one's own past experience is validated:

I find it helpful to talk with colleagues.... If you have a problem or if you are fed up, it's consoling to hear that someone else is fed up as well. I learned from talking with other teachers not to be discouraged when you reach the point where you say "there is so much to do here and I can't do it." We shared our concerns about the program.

Peer discussion is recognized as important because it allows teachers to clarify their expectations and focus their concerns arising from change. Not surprisingly their talk is used to raise the mutual problem of time itself, and it also provides ideas for what can be done the "next time" in the classroom:

One of the things that was helpful and that I'd like to continue is getting teachers together to discuss their problems with the program and pooling ideas on how they had overcome these problems. For example, we sat around for an hour discussing the problem of time—the fact that we were taking too long to complete particular parts of the program.

We discuss what we are doing and what things work well. Before there wasn't the need to communicate as there is now. We help each other with ideas about covering the material.... I modified my use of the program the more I learned about it and the more I discussed it with other staff members. It would be terrible to implement a new program and feel that you didn't have anybody that you could discuss it with.

Thus implementation is in part a social process of talking in which participants interpret the innovation in the context of their own educational beliefs, biographies, and ongoing classroom activities and concerns. Whether through informal talk or planned discussion sessions, teachers identify the elements of change essential to the new program in comparison with old practices, and mediate the time frame difficulties that the change highlights for them. Also, through talking with colleagues they build a common bond of understanding by defining their problems and the responses they deem appropriate. In this way they "take charge" once again of their own classrooms after the initial disruption brought on by the program change. Professional confidence is reestablished through such solidarity.

Discussion

The teachers' experiences and sense of duration during program implementation can be understood through two frames. Fixed-time represents objective, precise, and invariant units of duration as measured by the clock, calendar, timetable, or schedule. By means of these public reference points teachers anticipate and plan change, organize classroom activities, coordinate projects with colleagues, and judge the effectiveness of their work. Lived-time, however, is defined by the teachers' sense of inner duration in the ongoing flow of consciousness. They have an awareness of time's variable tempo marked by the demands of their expectations and interests and by the quality of their engagement with the task at hand.

When talking about this experience of duration from either frame, the teachers use a common stock of metaphors. (It would be difficult for anyone to discuss their experience of time in a taken-for-granted manner except through an array of metaphors provided as appropriate within ordinary language.) The following brief analysis of two metaphor clusters follows some of the work of Lakoff and Johnson (1980), who argue that “our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature” (p. 3).

There is one cluster associated with talking about the experience of objective-time. Time as a *commodity* “is a kind of [abstract] substance that can be quantified fairly precisely, can be assigned a value per unit, serves a purposeful end, and is used up progressively as it serves its purpose” (p. 66). Thus during program implementation, time is experienced in terms of amounts—blocks of time, enough time, too little time, extra time, available time, more time—that could be arranged and controlled in accordance with the teacher’s or administrator’s needs. As a *limited resource*, time can be managed wisely, conserved, wasted, given away, lost, used up, taken away, provided, shared, run out of, or put to good use in the service of accomplishing implementation. Time as *money* means that it can be spent, saved, amassed, budgeted, short-changed, borrowed, or stolen; it can be invested for expected pay-off, or it can be squandered with little regard for consequences. Time is also talked about as a *container* whose boundaries encompass the events of program change (“I did the activities in three hours,” “It took me two months to plan”); within these larger or smaller sized “containers” the teacher experiences and organizes implementation. Metaphors such as these treat time as discrete units of duration that may be measured, rearranged, amalgamated, or divided into appropriately sized blocks so that classroom work can be planned and its success judged in relation to projected target dates, timelines, and schedules. Implementation problems are seen to be solvable in large part by manipulating these amounts of time. Although these metaphors are coherent with each other, they obviously hide other aspects of the teachers’ experiences of time.

Another cluster of metaphors highlights time as *movement*. The teachers speak of it as a *moving object* which flies, passes, speeds, or drags by them. The future moves toward the teacher (“The time will come ...” “When the time arrives ...” “Coming up in the future ...” “In the weeks ahead ...”) and then recedes behind her (“The time has gone ...” “That’s behind me now”). She may move through time toward the future (“As I go through this year,” “The closer I get to Christmas I will ...”), or move through a series of *ongoing episodes* each having beginnings and endings. Sometimes these classroom episodes appear to have little relation to each other, and implementation is experienced as disjointed and somewhat random (“My activities were not related very well,” “The unity was lost”). Time is also a *liquid medium* which can be squeezed or stretched, and which moves slowly, rushes along, bogs down, and can be held back in relation to one’s expectations and interests. One can “jump right into” this flow and be immersed. These metaphors are coherent because they highlight the moving qualities

of duration—its ongoing and process character in relation to a teacher's concerns and goals—rather than the qualities of measurable amounts and discrete units.

Such metaphors are not merely poetic devices, nor are they arbitrarily chosen by teachers.³ Fixed-time metaphors are deeply rooted in ordinary language and our cultural orientation. For example, time as “money” or a “resource” are taken-for-granted concepts across the industrialized world. Everyday experiences with money and resources are used to conceptualize, organize, and talk about time as a valuable and even scarce commodity. We assign value to commodities as we use them to achieve our purposes. Not surprisingly, then, program implementation costs extra time, and there is never enough of this limited resource to use on what teachers want to accomplish in the classroom; they see themselves as actually spending, losing, wasting, borrowing, and running out of this “thing” called time. On the other hand, the metaphors associated with lived-time tend to be rooted in our body experience. We experience physical objects in part in terms of a spatial orientation, for example, as being to the front, above, below, behind, or to the side of us. We often speak of moving (quickly or slowly) toward objects that are in front of us, and away from the objects that are behind. Such orientation and movement in the physical world is relative to the position of our body and gives rise to spatial concepts that metaphorically structure some nonphysical experiences such as of duration. “By virtue of the ‘time is a moving object’ metaphor, time receives a front-back orientation facing in the direction of motion, just as any moving object would,” conclude Lakoff and Johnson (1980). “Thus the future is facing toward us as it moves toward us,” and the past is behind us (p. 43). The language that teachers bring to their experience of program change often portrays this conception.

The importance of recognizing these metaphors goes beyond an understanding of how teachers talk about time during program implementation. The very metaphors they use may shape their experience of change and may serve to guide their actions and attitudes toward it:

Metaphors may create realities for us, especially social realities. A metaphor may thus be a guide for future action. Such actions will, of course, fit the metaphor. This will, in turn, reinforce the power of the metaphor to make experience coherent. In this sense metaphors can be self-fulfilling prophecies.... What is at issue is not the truth or falsity of a metaphor but the perceptions and inferences that follow from it and the actions that are sanctioned by it. In all aspects of life we define our reality in terms of metaphors and then proceed to act on them. We draw inferences, set goals, make commitments, and execute plans, all on the basis of how we in part structure experience, consciously and unconsciously, by means of metaphor. (Lakoff & Johnson, 1980, pp. 156, 158)

When faced with a program change, for example, teachers do not only think and talk about time as a commodity—whether a resource or money—to be managed and used in various ways for the purpose of facilitating the change. The metaphors also provide the grounds for certain kinds of actions (e.g., establishing timelines and manipulating amounts of time) and experiences (e.g., tensions between objective and subjective-time). Because metaphors both highlight and hide aspects of the experience of program

change, teachers and administrators need to reflect on the implications of the metaphors they use for planning and organizing implementation. The two frames can be helpful analytic devices for becoming aware of how time is thought about and the actions that may be implied.

Implications

If, as Fullan (1982) claims, “individual meaning is the central issue” in program implementation, then it behooves us to take seriously that meaning for participants (p. 295). An important aspect of this meaning is that implementation and time are virtually synonymous for teachers. They talk about their implementation experiences from a temporal perspective because program change impacts on their time for planning and organizing lessons, becoming familiar with new materials and student activities, evaluating self and pupil work, and even for resisting the imposition that external innovations represent. Their talk highlights the concerns of not having enough time to accomplish everything that may be demanded or desired, of trying to cover too many things too soon in the classroom, and of resultant frustration. Time is therefore like a key thread that, when pulled, starts to unravel an entire garment. If implementation is defined as *actual use*—what teachers do with the program in their classrooms and how they interpret it for children—then there needs to be serious consideration of how teachers make sense of time and of the many ways in which they resolve any perceived tension between the two frames. As evidenced by the metaphors teachers use, both frames are an integral part of experiencing a new program. The ideal is to bring them into closer harmony with the kinds of mediation determined by the context.

Program developers can ask themselves what their work assumes about and implies for the teacher’s time. Innovators forget easily that the school curriculum includes more than their new program and that teachers may be dealing with other innovations simultaneously. What seem to be even small changes may put cumulative demands on the amount and use of teacher time for planning, experimenting, and reflecting. Such demands may not be realistic and may contribute to tensions between the two frames that do not facilitate the teacher’s task.

There are also implications for those who plan and administer inservice education across a school district. Typically such sessions are planned on a fixed-time schedule that presupposes all participants’ needs will be similar and that difficulties with implementation arise in the same sequence for all. But rates of implementation will vary, and this variability makes the planning of inservice difficult if it cannot be assumed that teachers are at the same place in a program or have the same concerns at the same time. Depending on the extent and nature of change, considerable flexibility may be advantageous in the timing, content, and format of inservice. Otherwise planning standardizes everyone’s experience, with the consequence that for many teachers the questions dealt with during inservice are already past or still in the future. Inservice content may be perceived as redundant, irrelevant, or well timed, depending on what the teacher is doing in the class-

room and how time tensions are being resolved. Part of the content of inservice could profitably deal with time, and the format of sessions could highlight teacher discussion with one another. Small group sessions, for example, allow participants with similar questions at a given time to make sense together.

This discussion of time makes problematic a common conception of implementation. Surely innovations are more than objects to be handed from the developers to the users; as embodiments of beliefs and values, new programs may be interpreted variously over time within different situations, by different people, and from various interests. This interpretation is complex because it has an *ongoingness* as an innovation is used and as conversation continues among participants. In a sense, then, the development of innovations such as curriculum documents and materials is never completed. The task may be initiated by a group called the *developers* and then further extended by teachers. Rather than assuming that they complete the innovation, developers at some point turn their work over to teachers who continue developing and modifying it. There may be agreement initially concerning its interpretation, but the ways in which the different parties continue to define what it is in their classrooms will reflect the various perspectives and contexts from which they individually work, with the result that the program may be in more or less constant change. What may have been apparent common sense at one time may become diverging views later on as redefining occurs. The meaning of the original project becomes changed over the course of experiencing its realization, and so innovations undergo modification or are discarded over time.

An understanding of time raises the political nature of change. Classroom life is shaped through the manipulation of fixed-time as more or less time is allocated to a new program. Teachers' experiences and their understandings of an innovation are influenced by those who schedule inservice training and who make time available. Thus the task of timetabling implementation is more than necessary administrative minutia. The control of time represents power and highlights once again the long-standing issue of teacher professionalization. One means of telling teachers *what they must do* is through the manipulation of timelines, schedules, and deadlines. Even when lived-time is recognized by administrators, there may be a tendency not to take it seriously or give it much importance. This is unfortunate, for teachers' experiences of subjective-time can be used to understand better and even to adapt the categories of fixed-time when and after they are planned. Everyone recognizes that a shortage of time is inevitable when change is attempted and that each individual daily devises ways to cope with temporal pressures. However, the fact that there is never sufficient time does not excuse those who are responsible for planning change to do so only on the basis of objective-time. Once a project is underway there needs to be sensitivity to lived-time and a willingness to continuously modify timelines, as well as an openness to criticism of the reasons for how time is allocated.

Notes

1. It is not assumed here that the problems of program implementation can be reduced to one issue, that of time. Obviously there are many interrelated aspects associated with successful change in classrooms, as well as many political, administrative, and ethical questions. Implementation depends on the multifaceted contextual conditions under which it occurs, and the teacher's experience of time is shaped by varied expectations, interests, presuppositions, and values.
2. The interviewer was Margaret L. Pike.
3. Metaphors do not always form coherent systems. There may be apparent contradictions because the metaphors we use are not wholly determined by our collective culture or body orientation, but also by our individual experiences. We would expect that teachers may use metaphors unrelated to the ideas of "commodity" or "movement" when talking about time.

References

- Fullan, M. (1982). *The meaning of educational change*. Toronto: OISE Press.
- Greene, M. (1973). *Teacher as stranger*. Belmont, CA: Wadsworth.
- House, E. (1981). Three perspectives on innovation: Technical, political, cultural. In R. Lehming & M. Kane (Eds.), *Improving schools: Using what we know* (pp. 17-41). Beverly Hills: Sage.
- James, W. (1904). *The principles of psychology*. New York: Henry Holt.
- Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago: University of Chicago Press.
- Leithwood, K.A. (1982). Implementing curriculum innovations. In K. Leithwood (Ed.), *Studies in curriculum decision making* (pp. 245-267). Toronto: OISE Press.
- Lieberman, A., & Miller, L. (1984). *Teachers, their world, and their work*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Lortie, D.C. (1975). *Schoolteacher: A sociological study*. Chicago: University of Chicago Press.
- Loucks, S., & Lieberman, A. (Eds.). (1983). Curriculum implementation. In *Fundamental curriculum decisions* (pp. 126-141). Alexandria, VA: Association for Supervision and Curriculum Development.
- Ott, W.H. (1980). Back to the basics for the educational decision-maker: Some philosophical considerations. *Canadian Journal of Education*, 5(4), 57-69.
- Pike, M.L. (1981). *Structures of curriculum change as experienced by teachers*. Unpublished master's thesis. Centre for the Study of Curriculum and Instruction, University of British Columbia.
- Ponder, G., & Doyle, W. (1978). The practicality ethic in teacher decision-making. *Interchange*, 8(3), 1-12.
- Psathas, G. (Ed.). (1973). *Phenomenological sociology: Issues and applications*. New York: Wiley.
- Sarason, S. (1971). *The culture of the school and the problem of change*. Boston: Allyn & Bacon.
- Schutz, A. (1970). *On phenomenology and social relations*. Chicago: University of Chicago Press.
- Schutz, A. (1975). *Studies in phenomenological philosophy*. The Hague: Martinus Nijhoff.
- van Manen, M. (1978). Languages of deep structure in curriculum inquiry. In K. Reeder & D. Wilson (Eds.), *Language, culture and curriculum* (pp. 43-59). Vancouver: Centre for the Study of Curriculum and Instruction, University of British Columbia.
- Werner, W., & Rothe, P. (1980). *Doing school ethnography* (Monograph Series No. 2). Edmonton: Department of Secondary Education, University of Alberta.
- Wolcott, H. (1977). *Teachers vs. technocrats*. Eugene, OR: Centre for Educational Policy and Management, University of Oregon.

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Old Shadows, New Images: A Revisionist View of the Principal's Role

Today's principal has multiple and complex roles and conflicting expectations. Current literature focuses on the principal as instructional and, ideally, symbolic leader. Technical management and humanistic skills are also expected; discipline is seldom discussed. Questionnaire findings from three recent studies of expectations of teachers and administrators (principals, board chairs, and superintendents) call for a revised view of the principal's role, however. A forced-choice instrument obtained rankings of five leadership roles for the principal. All respondents (but particularly teachers) preferred the disciplinary role, followed closely by symbolic and humanistic. Technical and instructional roles, while still important, ranked last. Our conclusion is that the old disciplinary shadow cast on the principalship must be reilluminated in the light of the new image of symbolic and humanistic leader.

All of us who went to school in the 1950s and earlier remember the fear that was associated with being sent to the principal's office. We remember, too, the shame (or the bold and unconvincing swagger) of the pupil who returned from the principal's office with red eyes and swollen hands. We've all seen movies about British private schools of an earlier era in which the headmaster administered ritual canings for major and minor offences in an attempt to strengthen the moral fiber of his pupils.

That kind of principal is gone; corporal punishment is rare, and the principal is no longer the authoritarian figure whose stentorian voice (over the intercom if the school was modern) began each school day with a prayer and a litany of announcements and reminders about acceptable school behavior. The principal is now expected to be a leader who embodies and symbolizes the shared values of the school community. Teachers, parents, students, school boards, superintendents, and the public at large expect the principal to have excellent leadership qualities; the preferred image of the principal is that of a superhero who inspires and encourages, consults and communi-

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cates, manages and orchestrates, balances the books and checks the bus schedules, roams the halls and talks on the telephone, thus juggling myriad duties while creating a positive climate for learning.

Admittedly, even the principal who fits this image still has to deal with disciplinary problems: Despite all preventive strategies, there will always be some students who do not assent to the values of the school and who persist in disruptive behavior ranging from rudeness to violence. For the most part, however, the principal's big stick has been replaced by a calm voice. Ideally, today's principal has learned effective communication skills and conflict management techniques in workshops and leadership academies. Putting them into practice is not really disciplining the students but persuading them to agree to modify their behavior for the good of the school community.

Discipline is only one of the many duties of the modern school principal, but it is seldom discussed in isolation in the large body of research literature on the principalship; when it is, it is seldom referred to as *discipline*. It seems that the very word has gone out of fashion, perhaps rightly so, for to read the history of the word in the *Oxford English Dictionary (OED)* is to be uncomfortably reminded of the sufferings of generations of monastics, prisoners, soldiers, and schoolboys.

While the original Latin root of the word *discipline* simply meant "to instruct," by medieval times its common meaning was "to chastise, correct, beat with rods." Through an accident of etymology, the English word *disciple* (from the same root) veered from the original Latin meaning of ordinary pupil or scholar and came to refer almost exclusively to one of the peaceful followers of Christ. Meanwhile, the semantic relative of the peaceful disciple evolved into the sadistic *disciplinarian* described in Fielding's novel *Joseph Andrews* as "scourging twenty or thirty boys in a morning." Thomas Gray is another author quoted in the *OED* as commenting on the religious fervor of "half a dozen wretches in a side chapel disciplining themselves with scourges full of iron pricks." Even the editors of the *OED* cannot resist making a bracketed editorial comment when they define discipline as "punishment inflicted by way of correction and training; in religious use, the mortification of the flesh by penance; also, in a more general sense, a beating or other infliction (humorously) assumed to be salutary to the recipient."

A sorry history indeed. Because discipline throughout the centuries has so closely linked physical punishment with obedience and moral training, it is no wonder that educators today are reluctant to use the word and more reluctant still to use the disciplinary techniques of the past. The collective memory of the English-speaking world is accurate: The word is tainted, perhaps irredeemably so.

Purpose

This is an article we did not intend to write. We certainly do not advocate a return to the days of the principal with a big stick, a flexible cane, or a thick strap, nor do we have a particular research interest in modes of discipline in

today's schools. We came to this area of study almost by accident in the course of a research practicum for graduate students in the Extended Campus Program in the Department of Educational Administration at the University of Alberta.

Extended Campus is an innovative outreach program initiated in 1981 to deliver Master of Education courses to a variety of professionals—mainly teachers, principals, and administrators in other human service fields—in areas remote from the Edmonton campus. In an attempt to integrate course offerings and develop a series of research projects which would build on one another, we decided two years ago that the student cohorts under our direction in the Extended Campus Program would conduct research projects focused on various aspects of school administration. A proposal was developed for a comprehensive research project entitled "School Administration in Transition," which could be broken down into a number of smaller student-staff research projects. The students' course work in statistics, research design, project design, and project management could then be integrated in a practical way with the work required to complete a joint research project. While major provincial funding for the "School Administration in Transition" project ultimately did not come through, the project is now being undertaken in a piecemeal manner using such funding as is available. The 1985-86 Red Deer cohort completed a pilot project on the selection of school administrators in central Alberta, and the 1986-87 Vermilion cohort examined the changing role of the principal in northeastern Alberta.¹

Peripheral to the main findings of these two research projects, one of the secondary findings in both studies was rather surprising. Analysis of data provided by principals, assistant principals, and teachers revealed that the role of the principal as disciplinarian is more important than would have been expected, given the current focus in the research literature on the principal as an instructional or educational leader.

The purpose of the present article, then, is to throw light on a shadow: to evaluate one secondary finding of the Central Alberta and Northeastern Alberta studies, as well as the findings of a new survey of superintendents and school board chairs in the province of Alberta, in light of the current research on the principalship. Our general aim is to examine the expectations of stakeholders and principals themselves with regard to the role of the principal. More specifically, based on the results of these three surveys, we have attempted to determine how important the role of disciplinarian actually is among the many roles expected of the principal today and to describe the manner in which this role is now understood.

Literature on the Principalship

In recent years there has been extensive research interest in the principalship, particularly in how principal effectiveness relates to school effectiveness (Leithwood & Montgomery, 1986; Manasse, 1985). Leithwood and Montgomery (1986) have placed the majority of studies relating to improving principal effectiveness in three major categories: those which examine

the principal's role, including his or her leadership, instructional, managerial, and administrative duties; those which look at the principal's effect on school change and educational innovation; and those which try to delineate the principal's part in improving school effectiveness (p. 204). Other major types of recent research on the principalship include studies of the nature of principals' work, their selection (including the underrepresentation of women and minorities), their training, their individual characteristics and perceptions, and the influence of situation and environment on them (Mulhauser, 1983). In Alberta, where our three studies were conducted, recent research has also included studies of principals' job satisfaction (Friesen, Holdaway, & Rice, 1984; Gunn & Holdaway, 1985), job stress (Jankovic, 1983; Ratsoy, Sarros, & Aidoo-Taylor, 1986; Sarros & Friesen, 1987), decision making (Ewanyshyn, 1986; Grainger, 1984), and involvement with parents (Payne, 1987).

Most of these studies discuss only in passing the topic which turned out to be of most interest to us in this paper: the role of the principal as disciplinarian. We are not claiming that it is the most important of the principal's many roles. But the disciplinary role is receiving much less attention in the literature than other roles the principal fills—particularly the instructional leadership role—and our findings show that it deserves a much higher level of recognition.

The Multiple Roles of the Principal

Current research makes it clear that the role of the principal today is defined by complexity, multiplicity, ambiguity, and change. The principal is responsible for a large number and wide variety of duties: just how many can be illustrated by the massive list of 148 traits of the effective principal compiled by the Phi Delta Kappa Center on Evaluation, Development and Research to introduce its collection of recent research on the role of the principal (1984, pp. 2-3). Koener gives a more concise description of the principal's actual duties: "make realistic budgets, act as a curriculum expert, personnel manager, contract negotiator, public relations expert, disciplinarian, planner, and instructional leader" (Krajewski, 1977, p. 16).

Manasse (1985) also points to the multiplicity of principals' roles and summarizes the kind of work that principals do, based on a number of recent descriptive studies:

Administrative work is characterized by (1) a low number of self-initiated tasks, (2) many activities of short duration, (3) discontinuity caused by interruptions, (4) the superseding of prior plans by the needs of others in the organization, (5) face-to-face verbal contacts with one other person, (6) variability of tasks, (7) an extensive network of individuals and groups, (8) a hectic and unpredictable flow of work, (9) numerous unimportant decisions and trivial agendas, (10) few attempts at written communication, (11) interactions [predominantly] with subordinates, and (12) a preference for problems and information that are specific (rather than general), concrete, solvable, and currently pressing. (p. 442)

The principal's world, then, is fragmented and ambiguous. Manasse points out that "Even the most effective principals ... consider ambiguity and con-

flicting role demands to be a major source of frustration in their jobs” (1985, p. 444).

The Principal as Instructional Leader

Everyone who has been reading recent educational research literature knows of the central focus on effective schools: Effectiveness is generally measured by student achievement, and effective instructional leaders are at the helm of these schools. It is seldom necessary to argue, as Shoemaker and Fraser felt obliged to do in their 1981 review of effective schools literature, that effective schools are possible, that “schooling *does* make a difference” and that “principals are clearly important in determining the effectiveness of schools” (p. 178). In a similar literature review, Sweeney (1982, p. 346) asserts strongly that “The direct responsibility for improving instruction and learning rests in the hands of school principals.”

Effective instructional leaders, according to Persell and Cookson (1982), demonstrate a clear commitment to academic goals and create a climate of high expectations. But they do even more:

More effective principals appear to become directly involved in instructional policy by sitting down and meeting with their teachers. Some principals supported their teachers' attendance at workshops or actually ran such workshops themselves. It isn't enough for the principal simply to convey the expectation of academic achievement without also stressing teaching strategies and behaviors that could be used to achieve those expectations. In the higher-achieving schools, principals were able to get teachers to use positive rather than negative reinforcement with students.... The importance of a change or an instructional strategy can also be conveyed by establishing incentives for using them. (p. 23).

Clearly, the literature presents an ideal image: the principal as instructional leader. Accepting this ideal, Alberta Education (1985) states unequivocally in its report *Partners in Education: Principles for a New School Act* that “the primary role of the School Principal is as the educational leader in the school and the local school community” (p. 43). The Alberta School Trustees' Association has adopted a similar position.

Most recent researchers do not question the ideal of instructional leadership, but they are asking what kind of instructional leadership should be provided and whether the principal alone must provide it. Mulhauser (1983), for instance, critically reviewed the recent research on all facets of the principalship. While finding that the theme of principals as leaders of instruction is “classic,” he also raised the question of whether the principal should “inspect and direct the fundamental teaching-learning work of the school, or simply get out of the way in order to permit skilled teachers to get on with their own vision of how that should go” (pp. 7-8).

Other researchers have found that “teachers do not generally *perceive* principals as instructional leaders ... nor do principals usually function as such” (Gersten, Carnine, & Green, 1982, p. 48). Morris, Crowson, Hurwitz, and Porter-Gehrie (1982) also question the conventional wisdom that the principal is and should be the instructional leader, finding that “instructional leadership ... is *not* the central focus of the principalship” (p. 689). Examining what principals actually do, Morris et al. (1982) find that principals

spend most of their time on school-monitoring behaviors, serving as the school spokesperson outside the school, communicating with staff within the school, handling disturbances, and allocating resources (p. 689). Two of these five activities are clearly related to disciplinary activities, though Morris et al. do not use this term; in their words, the principal is responsible for the "maintenance of a controlled, orderly learning environment" (p. 690). Sackney (1980) suggests, furthermore, that teachers do not really *want* principals to be instructional leaders who intervene specifically in their classroom teaching; basically, they just want "to be left alone" (p. 2). What they want principals to do is make their job less frustrating, provide warmth and support, be fair, and help them with difficult students and parents (p. 2). Manasse (1985) confirms Sackney's conclusions, saying "Teachers appreciate principals who consistently emphasize educational objectives and who offer support and resources for attaining those objectives. However, there is some doubt about the effects of closely supervising the techniques of teaching" (p. 449).

Gersten et al. (1982) try to take some of the load off the principal as instructional leader, arguing that "those components of effective leadership which we call instructional support functions need not all be carried out by the principal. Realistically, most schools will need more than one person to adequately carry out all these activities anyway" (p. 49). They suggest that teachers, supervisors, curriculum experts, and other available personnel can just as effectively carry out instructional support functions, thus obviating the need for the principal to be the sole instructional leader. Rallis and Highsmith (1986) also argue that "school management and instructional leadership are two separate tasks that cannot be performed by the same individual" (p. 300). They maintain strongly that instructional leadership should come from within the ranks of the teaching profession rather than from the principal:

At the same time that the effective schools movement has been calling for principals to become strong instructional leaders, teachers have been seeking a stronger voice in regulating and developing their own profession. As professionals, good teachers recognize the need to improve their knowledge and skills, to find rewards in their daily work, and to maintain the quality of newcomers to the profession. Teachers need leadership to make these tasks easier, but current research affirms that teachers are dubious of leadership from the outside.... In other words, teachers desire instructional leadership and recognize the need for it, but they are beginning to demand that it come from within their profession, not from without. (p. 300)

Rallis and Highsmith suggest that master teachers rather than principals should be the ones responsible for instructional leadership. Principals will then be freed to perform other essential management roles, creating "a safe and professional climate" and "protecting and enabling others to provide developmental leadership" (p. 303).

Thus while it may be ideal for principals to be instructional leaders, it may not be realistic for them to function as such, given their wide range of other duties. Furthermore, teachers may not want them to be, preferring to retain their professional autonomy over what goes on in the classroom. As Yukl (1982) says, "since teachers are professionals who insist on con-

siderable autonomy, close supervision is largely precluded" (p. 7). And even if principals do want to be better instructional leaders, they will find little practical guidance in the effective schools research on how they can improve their instructional effectiveness (Mulhauser, 1983, p. 224).

A new direction in research is that provided by Leithwood and Montgomery (1986), who go beyond instructional leadership in describing the complex role of the most effective principals. Leithwood and Montgomery have developed a comprehensive profile of four types of principals, from the least to the most effective (p. 17). At the bottom level is the Administrator, who focuses on rules and regulations and is only marginally effective as a principal. At the second level is the Humanitarian, who focuses on interpersonal relationships and is a modestly effective principal. At the third level is the Program Manager, whose focus is on programs. Roughly equivalent to what others have called the instructional leader, the Program Manager is a reasonably effective principal. The highly effective principal, whom they call the Systematic Problem Solver, goes beyond a dependence on developing and implementing programs; promoting student growth is the "bottom line" concern. Principals who are Systematic Problem Solvers are adaptable, creative, visionary, and consistent in applying a wide range of clearly delineated goals and specific strategies to each complex situation they encounter. All four types of principals must deal with disciplinary matters; what Leithwood and Montgomery do is discuss the differing orientations toward discipline that each type of principal has.

Literature on School Discipline

With its emphasis on school effectiveness and instructional leadership, current literature on the principalship seldom focuses on the principal as disciplinarian. For instance, Leithwood and Montgomery's *The Principal Profile* (1986) is extremely comprehensive, yet it discusses discipline only briefly, as a small but important part of a complex of goals, factors, strategies, and decision making procedures used by principals.

Sometimes, in the course of a more specific study, the continuing importance of the principal's disciplinary role emerges as a side issue which is not focused on. An article by Hubert and Dueck (1985) is a case in point. In a study of on-the-job training of assistant principals, both principals and assistant principals were asked to rank a list of 33 tasks in terms of the actual extent of training which principals provided to assistant principals. "Taking action on discipline measures requiring intervention" was rated highest by principals and third highest by assistant principals; "establishing policies and procedures for student discipline" was rated highest by assistant principals and fourth highest by principals. In their conclusions, Hubert and Dueck do not mention the importance of giving training in disciplinary matters because this was not one of their original research questions. However, this secondary finding is clear from their data.

Some researchers have brought the issue of school discipline out of the shadows. Crowson and Porter-Gehrie (1981) discuss the need for the principal to maintain organizational stability, manage conflict, and "keep the lid

on" (p. 27). Others (Burns, 1985; Jones, 1984; Nicholson, Stephens, Elder, & Leavitt, 1985; Purkey & Smith, 1983) discuss the need for "safe schools" and indicate that the development of such safe schools must be a cooperative effort of all parties involved (students, teachers, parents, the community, and the principal). These authors link safe schools with effective schools and focus on the creation of a positive school climate in achieving them. In other words, the principal is no longer seen as having sole responsibility for maintaining discipline, and discipline is seen as only one of several factors contributing to a positive school climate which can foster learning.

Most of the recent studies focusing on school discipline have been in the United States; Canadian studies are rare. But Clarke (1977) did conduct a far-ranging study of discipline in Alberta schools. The fact that he surveyed nine groups of stakeholders (principals, assistant principals, teachers, students, parents, superintendents, school trustees, central office personnel, and regional office personnel) indicates his sensitivity to the collaborative nature of disciplinary procedures and policies in schools today. His results showed a diversity of views on the subject: 41% of stakeholders felt that school discipline was just about right, and 34% felt it should be stricter (p. 2). Clarke stressed that "although groups differ ... in their views on school discipline, group differences were overshadowed by the diversity of view within any one group" (p. 5). His overall conclusion was that while "there was considerable satisfaction with school discipline as it was in 1975-76," any change should be in the direction of "slightly stricter school discipline" (p. i). Perhaps the relative paucity of Canadian studies of school discipline reflects that it is less a problem in this country than in the United States. Clarke's indication is that, at least in Alberta in the mid-1970s, stakeholders were fairly conservative and fairly satisfied with the status quo. His results also indicated, however, that the issue of school discipline can evoke a wide variety of responses from stakeholders, some preferring more leniency and others more strictness.

Clarke offers several definitions of discipline, including the broad dictionary definitions which focus on goals (training pupils in orderly conduct and action) and methods (control and direction by an authority figure). Pointing out that dictionaries invariably single out the method of punishment, he goes on to say that educational researchers define *school discipline* more narrowly, with less focus on punishment (pp. 9-10).

A general definition of school discipline which we would adhere to is that provided by Dettman: "the state or condition of order or good behavior among the students ... [and] the procedures by which this state of order is maintained" (Clarke, 1977, p. 11). For optimum learning to take place, an orderly and safe school is obviously necessary. The question is, what procedures should be used? It is clear that "discipline enforced by graded penalties such as reprimands, detention, withdrawal of privileges, corporal punishment, and expulsion is giving way to discipline developed by organizing the school in such a way that disorder will be avoided and self-control promoted" (p. 11). The modern trend in school disciplinary procedures, a

trend we certainly go along with, is thus “toward a more positive approach where the individual controls his own conduct toward realization of his own goals, as contrasted with a rather negative reliance on sanctions producing fear of being caught misbehaving” (p. 12).

This is exactly the orientation toward discipline which Leithwood and Montgomery (1986) put forward. Their discussion of what school discipline should be like reinforces the views of previous researchers in both the United States and Canada. In their study of Ontario principals, Leithwood and Montgomery found that the most effective principals cooperate with students, teachers, and principals to achieve a level of discipline which is “reasonable, fair, and consistent and is designed to help the student to develop and overcome problems” (p. 78). The principal’s role is to establish and review criteria and standards for discipline in collaboration with staff and students, communicate them clearly, and ensure that they are not only widely shared but consistently applied and interpreted (p. 106).

In summary, current research literature clearly acknowledges that the principal has multiple roles and advocates either the instructional leadership role or one that is even more comprehensive. In either case, the disciplinary role is underemphasized. The findings of three studies we have recently undertaken in Alberta indicate that some revision of these current views of the principal’s role may be necessary, with a view to redefining the principal’s disciplinary role.

The Central Alberta Pilot Study

The pilot project for the “School Administration in Transition” project was undertaken in 1985-86 by a cohort of graduate students enrolled in the University of Alberta’s Extended Campus Program in Red Deer. Assigned to teach the Research Methods and Data Analysis courses in this program, two of the authors decided as an innovation to combine the two courses and to use a real research project as the medium for delivering the course content. A request-for-proposal specifying a study on the selection of school based administrators—that is, principals and assistant principals—was given to the students before the first class. As there was limited time to undertake the project, a collection of appropriate articles and a review of the literature on the principalship was prepared and given to the students at the same time.

The students in the class formed the research team; the two instructors acted as project directors and consultants. Students were first assigned the task of preparing a formal research proposal for the project. The resulting four proposals were combined into a final proposal. Two of the resulting 15 research questions are of particular interest in this paper:

1. What are the perceptions of key stakeholder groups regarding the desired characteristics—personal attributes, preparation, skills, previous experience—of school based administrators?
2. What are the perceptions of key stakeholder groups regarding the desired leadership roles of school based administrators?

Due to constraints of both time and resources, the study was delimited geographically to the 10 school divisions and counties in Zone 4 in central Alberta (one of the six administrative zones in the province designated by Alberta Education). Stretching about 300 km from the Rocky Mountain foothills to the Alberta-Saskatchewan border, Zone 4 contains mainly small rural school districts, although the large urban school districts in Red Deer were also included in the study area. Key stakeholders were delimited to school board chairs, superintendents, school based administrators, and teachers. A questionnaire was used to survey the perceptions of a sample of teachers and school based administrators, and interviews were conducted with a sample of school board chairs, superintendents, and school based administrators.

Development of the Instrument

Using their reading as well as their own experience as principals and teachers, each four-student project team developed a questionnaire for teachers and school based administrators and an interview schedule for each of the school board chairs, superintendents, and school based administrators. The resulting questionnaires and interview schedules were used by the course instructors to develop a questionnaire and interview schedule for each of the three stakeholder groups.

While the questionnaires from the four student groups were being reviewed, it became apparent that a great number of different characteristics and behaviors of school based administrators had been identified. It was also apparent from the literature that each of these characteristics and behaviors would be important in a school based administrator, and that if a traditional Likert scale ranging from Not Important to Very Important were used to elicit responses, most would be rated Important or Very Important. While we considered it necessary to identify all the characteristics and behaviors which seemed relevant, doing so would not help identify the *most* important. Ranking of all characteristics was ruled out, as it has been shown that respondents have trouble ranking more than four or five alternatives (Sudman & Bradburn, 1983, p. 149). We had to find another procedure which would enable respondents to discriminate more important from less important role behaviors and characteristics of the principal.

Sergiovanni's 1984 article "Leadership and Excellence in Schooling," a seminal article which distinguishes the competent school from the excellent one, provided us with the direction we needed to solve the problem of ranking. Drawing together current thinking on the leadership qualities of principals, Sergiovanni has developed a provocative model of five *leadership forces*² which he believes the principal embodies (p. 6). (a) The *technical* leader uses sound management techniques to plan and coordinate activities within the school. (b) The *human* leader uses highly developed interpersonal skills to provide support, encouragement, and growth opportunities for everyone in the school. (c) The *educational* leader is the classic instructional leader who has been the focus of much current literature. These first three leadership forces are crucial features of competent leaders, but they do not

assure excellence in leadership: two other leadership forces must be present in the principal of an excellent school. (d) The *symbolic* leader “assumes the role of ‘chief’ and by emphasizing selective attention (the modeling of important goals and behaviors) signals to others what is of importance and value” (p. 7). (e) The *cultural* leader “assumes the role of ‘high priest’ seeking to define, strengthen, and articulate those enduring values, beliefs, and cultural strands that give the school its unique identity” (p. 9).

Impressed by the clarity and apparent comprehensiveness of the Sergiovanni model, we decided it would provide a usable framework for a forced-choice portion of our questionnaire. The characteristics and behaviors identified by the student research teams were examined and then sorted to see how well they fit the Sergiovanni model.

Two unanticipated problems arose during this process. First, while most of the behaviors/characteristics fitted well within one of Sergiovanni’s five categories, a number of residual behaviors/characteristics concerning discipline remained. Sergiovanni does not discuss discipline explicitly, though he does mention “conflict management” as one of the interpersonal skills of the “human leader.” Perhaps his hierarchical model, then, subsumes the characteristics and behaviors of the disciplinarian under this category. Yet it seemed to us that the issue of discipline had been neglected in the Sergiovanni definition of leadership forces and that a sixth category, *disciplinarian*, should be added.

To create a forced-choice series of questions, we described distinctive examples of behaviors or characteristics for each of the six categories. This is where the second problem occurred. Sergiovanni’s cultural leader and symbolic leader categories were found to overlap because examples of behaviors or characteristics developed for one category seemed to fit equally well into the other. Accordingly, we modified the Sergiovanni model further, merging the two highest order categories into a single category which we called symbolic leader, thus leaving five categories: (a) symbolic, (b) instructional, (c) humanistic, (d) technical, and (e) disciplinary.

Four examples of behaviors or characteristics for each of these five categories were identified. One behavior or characteristic from each category was paired with one from each of the others, resulting in 10 pairs. Respondents were asked to assume they were choosing 10 school principals. In each case, the two candidates remaining on a hypothetical short list were identical except for two behaviors or characteristics. The pair of behaviors or characteristics was given, and respondents were required to choose one or the other. As a result, a picture of an individual’s preference for a certain kind of principal would emerge.

The Sample

Questionnaires were sent to principals, assistant principals, and teachers in Zone 4, which has 126 schools with more than four full-time equivalent teachers. As 100 responses per category was deemed sufficient for statistical analysis, questionnaires were sent to all school based administrators in Zone 4 and to a sample of teachers. A cluster sample (all teachers from 12

randomly chosen schools) resulted in a full-time equivalent sample size of 168 teachers. Table 1 shows the response rate for questionnaires sent to each group for the Central Alberta pilot project and two follow-up studies which will be discussed later.

Data Analysis

Desired characteristics of school principals. As shown in Figure 1, all respondents have very high expectations for principals. While there were some differences among groups of respondents, the rankings of the characteristics were in essential agreement. For this reason, the data are aggregated in this figure. The average score for the respondents' ranking of 9 of the 11 characteristics was greater than 2.5, that is, Important or Very Important.

These rankings fall into three groups. (a) Three of the characteristics were rated as Very Important (mean score greater than 3.5). In rank order, these were outstanding interpersonal communications skills, extensive teaching experience, and highly efficient management skills. (b) Six of the characteristics were rated as Important (mean score greater than 2.5 but less than 3.5). In rank order, these were highly skilled leadership in staff meetings, superior qualities as an instructional leader, superior performance as a classroom teacher, being an exemplary role model in the community, having a charismatic personality, and having graduate level preparation in educational administration. (c) A third category was made

TABLE 1
Response Rates

Location	Number Sent	Returned Usable	Returned Unusable	Total Returned	Return Rate
<i>Central Alberta</i>					
Teachers	168 ¹	156	0	156	92.86%
Principals	126	110	3	113	89.68%
Assistant Principals	100 ²	80	3	83	83.00%
<i>Northeastern Alberta</i>					
Teachers	174 ¹	130	0	130	74.71%
Principals	62	44	0	44	70.97%
<i>Province Wide</i>					
Superintendents	113	100	3	103	95.15%
Board Chairs	140	108	1	109	77.86%

¹This is a full-time equivalent number. The actual number of teachers would be greater.
²This is an estimate of the number of assistant principals in the schools surveyed.

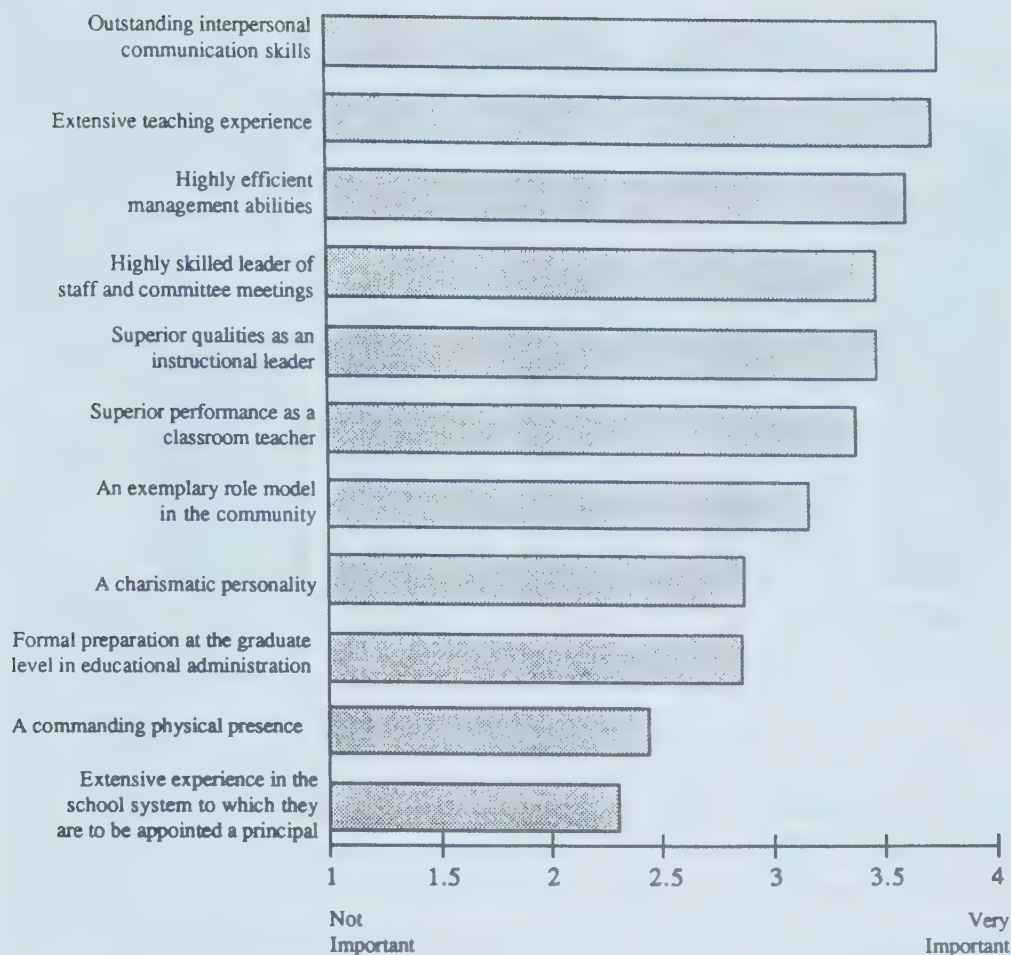


Figure 1: Desired characteristics of the principal (Central Alberta Pilot Study)

up of two items for which the average mean score was less than 2.5: a commanding physical presence and extensive experience in the school system to which an administrator is appointed.

These findings were not surprising. The way in which the questions were asked permitted respondents to be expansive in describing their preferences. When we placed respondents in a forced-choice situation, however, we were able to distinguish a clear pattern of preferences among five important roles of the principal.

Desired leadership roles in the principal. As explained earlier, five leadership roles of the principal were identified for investigation in this pilot study. The findings regarding the desired roles of the principal are shown in Figure 2. Teachers and school administrators agreed on the rank order of the first three roles—disciplinary first, followed by humanistic and symbolic. Teachers ranked the technical role fourth and the instructional leader role fifth, while school administrators reversed this, ranking instructional fourth and technical fifth.

An interesting finding is revealed when teachers' responses are compared to school administrators' responses. This question was scored so that the maximum score any of the roles could receive was 8, while the minimum was 0. The average score for teachers for disciplinarian (6.09) was 1.02 points higher than the school administrators' average score (5.07),

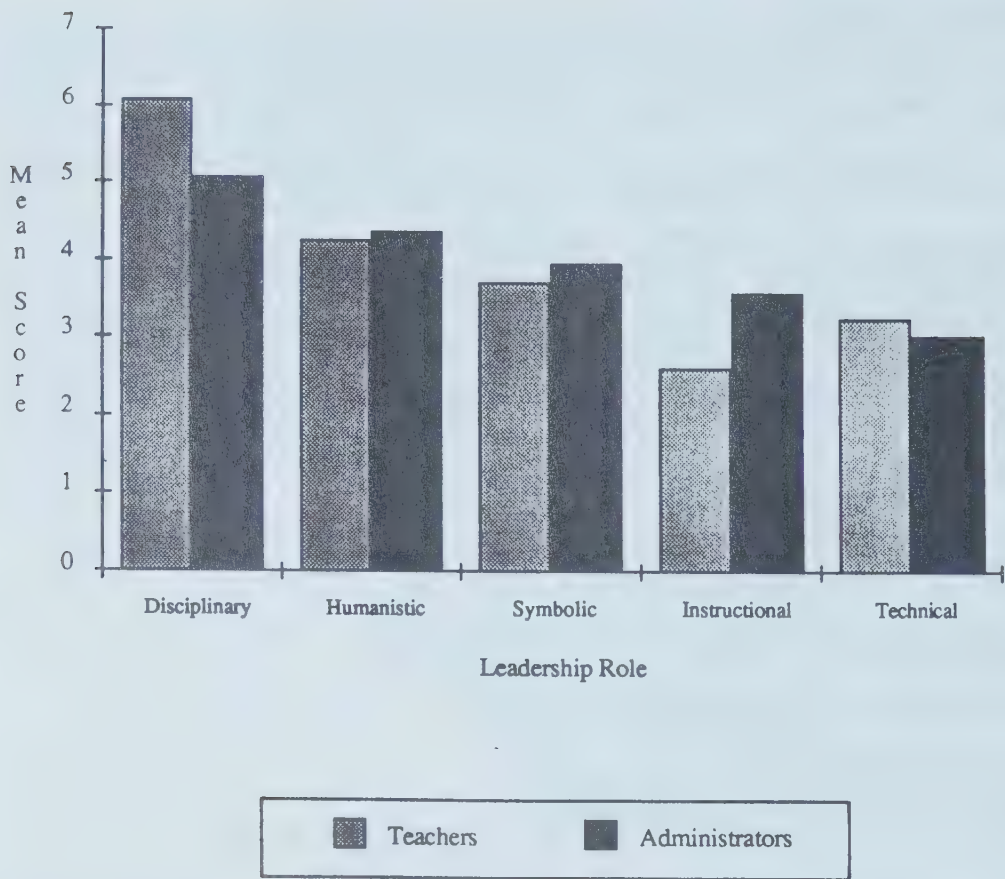


Figure 2: Strength of leadership role required of principals as perceived by school administrators and teachers (Central Alberta Pilot Study)

while for instructional leader (2.67) it was 0.96 points lower than the administrators' score (2.61). These two differences were found to be significant (t-tests, $p \leq 0.05$), indicating that while both teachers and school administrators see the most important role of the principal as that of disciplinarian, teachers see this as significantly more important than do school administrators. Conversely, both teachers and school administrators see the role of instructional leader as relatively less important than the other roles, and teachers perceive this role to be significantly less important than school administrators do.

The most noteworthy finding, then, was that both teachers and school administrators saw the role of the principal primarily as that of disciplinarian, giving this role a significantly higher ranking than the other four (ANOVA, $p \leq 0.05$). Furthermore, although much of the current literature on the role of the principal stresses the importance of the principal as an instructional leader, the questionnaire results here show that teachers rank this role last, and school administrators rank it second last.

During interviews, administrators revealed in response to an open-ended question that they perceived the most important roles of the school based administrator to be related to management, instructional leadership, interpersonal relationship skills, and public relations. In light of the strong finding in the questionnaire data that both teachers and administrators felt the disciplinarian role to be most important, it is significant that during inter-

views, only 6 out of a total of 131 specific comments offered by administrators related to the role of disciplinarian.

These findings were surprising to us. How do we account for the silence of school administrators in discussing the disciplinarian role in interviews, in view of the importance they attached to it in the forced-choice question format of the questionnaire? How do we account for the apparent dissonance between our findings and the literature regarding the importance of instructional leadership? With these questions in mind we undertook two follow-up studies: (a) a study of principals and teachers in another geographic region, northeastern Alberta, and (b) a study of superintendents and board chairs throughout Alberta, using a slightly modified forced-choice instrument.

The Follow-Up Studies

During the 1986-87 academic year, students in the Research Design and Statistics courses in the Vermilion Extended Campus Program undertook a study entitled "The Changing Role of the Principal in Northeastern Alberta," using methodology similar to that described for the Central Alberta Pilot Study. Because of the very interesting findings with respect to the role of the school administrator as a disciplinarian, we decided to "piggy-back" a replication study. At the same time, we undertook an independent study to find out what school superintendents and school board chairs throughout the province thought about the role of the principal.

Research Questions

Based on the findings of the Central Alberta Pilot Project, the following research questions were developed:

1. Given a list of characteristics of school principals, will respondents once again rate almost all of the characteristics as being important?
2. Will there be any differences of responses among groups on the rating of these characteristics?
3. In the forced-choice situation, how will respondents distribute their preferences among the five identified leadership roles?
4. Will there be any differences of responses among groups on the rating of these leadership roles?

Development, Validity, and Reliability of the Instrument

Sections of the questionnaire used in the Central Alberta Pilot Study were modified slightly for use in these two studies. The number of characteristics to be rated was increased from 11 to 15. A section addressing specific experiences which might be useful in preparing for a principalship and a short demographic information section were added. One modification was made in the forced-choice series of questions used in the Central Alberta Pilot Study. Our concept of disciplinarian was narrowed and sharpened. We had included in the pilot study the characteristic "knows the strengths and weaknesses of individual teachers" as one of the alternatives which we had scored as a characteristic of a disciplinarian. On analysis of the data, discus-

sions with others in the field, and a more specific review of the literature, we felt that the role of disciplinarian should be limited to that of student disciplinarian. The alternative was replaced with "adjusts disciplinary measures to meet individual student characteristics." The revised forced-choice instrument is shown as Figure 3.

To test the face validity of the forced choice instrument, we gave descriptions of our five leadership roles to a number of our colleagues and students and asked them to categorize each item according to leadership role. Their categorizations were in almost unanimous agreement with the intended categorization in each case.

To test the reliability of the instrument, we administered it to 45 MEd and PhD students in our Department of Educational Administration, with a retest the following week. For the 10 forced-choice questions, there was agreement ranging from 71% to 89%, with an average of 79%. Correlations between the first and second administration for each of the five leadership roles were all significant at $p \leq 0.001$.

Selection of the Sample

The Northeastern Alberta study on the changing role of the principal was delimited to school jurisdictions in eight counties and school divisions in Zones 2 and 3, northeast of Edmonton. Stretching 200 km west from the Alberta-Saskatchewan border to about 50 km east of Edmonton, the study area contains mainly rural schools with enrollments of 300 or fewer; no urban school districts were included. All principals in these jurisdictions were surveyed, and a cluster sample of all teachers in 10 randomly selected schools formed the teacher sample.

To supplement the data gathered in this second regional study, we carried out a third study with superintendents and board chairs throughout the province. Because there are 142 public and separate school jurisdictions which actually operate schools in the province, it was decided to send questionnaires to the board chair and the superintendent of each district. A number of superintendents in the province act as superintendent for more than one jurisdiction. In these cases, the superintendent received a single questionnaire. Table 1 reports the response rate for the two follow-up studies as well as the Central Alberta Pilot Study.

Desired Characteristics of School Principals

Respondents were asked to rate the importance of the 15 identified characteristics. The results were scaled, with Not Important being set at 1 and Very Important at 4. There was substantial agreement among the groups on the rating of these characteristics. Figure 4 aggregates responses from the four groups and ranks the 15 characteristics from highest to lowest. All respondents had very high expectations of principals: Only three of the characteristics had a mean rating less than 2.5 (the lower limit of the Important rating). Five of the characteristics had a mean rating greater than 3.5, indicating a consensus that they were Very Important. Interestingly,

You are asked to take on the role of an interviewer faced with the task of choosing ten school principals. The applicants have been short-listed so that in each competition only two remain. In each of the ten cases below, the applicants are identical in all respects except that one applicant strongly exhibits the behavior or characteristic described in statement A; the other, the behavior or characteristic as described in B. In each case, choose the person who shows the behavior or characteristic which you feel is *more important* for an effective school principal. Circle the statement label (A or B) to indicate your choice.

1. A clearly communicates school goals, programs and policies to the community
 B engages regularly and effectively in teacher and program evaluation
2. A encourages team spirit among staff and students
 B develops and implements clear policy for student behavior
3. A acquires efficiently the necessary resources for the operation of the school
 B is always empathetic with students, staff, and parents
4. A is an exemplary teacher
 B is "firm but fair" in administering discipline within the school
5. A is a strong "people person"
 B has a clear vision of the future for the school
6. A outlines administrative practices and procedures clearly to staff and students
 B strongly encourages the professional development of teachers
7. A displays a lively and timely sense of humor
 B adjusts disciplinary measures to meet individual student characteristics
8. A ensures that school goals are identified and acted upon
 B delegates tasks and ensures completion
9. A efficiently allocates and monitors the use of resources
 B handles student discipline problems firmly and decisively
10. A is readily available to meet with parents, teachers, and students
 B offers useful feedback to teachers on their instructional performance

Figure 3: Selecting a principal

these five characteristics would each make a good one-sentence description of one of the five leadership roles in our revised Sergiovanni model.

A One-Way Analysis of Variance was performed on the scores of each of the 15 characteristics, with the respondent group being the independent variable. Significant differences between respondent groups were found in nine of the characteristics.³

Leadership Roles

As shown in the previous section, the respondents rated a single-sentence description of each of the leadership roles as Very Important. The forced-choice series of questions then permitted discrimination among these five leadership roles. That is to say, we were able to achieve fine resolution of leadership roles which seem to be of equal importance to respondents. Figure 5 shows the mean rating for each of the five leadership roles for each of the four groups of respondents. A Two-Way Analysis of Variance with one factor repeated was performed on the Figure 4 data to see whether there was an overall main effect for leadership roles.⁴ A significant main effect across leadership roles and a significant interaction effect were found. Two clear groupings emerge: Symbolic, disciplinary, and humanistic leadership roles all have a mean score around 4.5, while technical and instruction-

al have mean scores around 3.15. Scheffé tests ($p \leq 0.05$) revealed significant differences between each of the leadership roles in the first group and each of those in the second group. The results are shown in Table 2; significant differences between leadership roles are indicated with an asterisk.

The significant interaction effect on the two-way repeated measures ANOVA indicates there is some disagreement between groups of respondents as to the relative importance of the five leadership roles. This can also be seen from an inspection of Figure 4. To examine whether there were significant differences between respondent groups on their ratings of leadership roles, a One-Way Analysis of Variance was performed between the four respondent groups for each of the five leadership roles. Significant differences, summarized below, were found for three of the leadership roles.

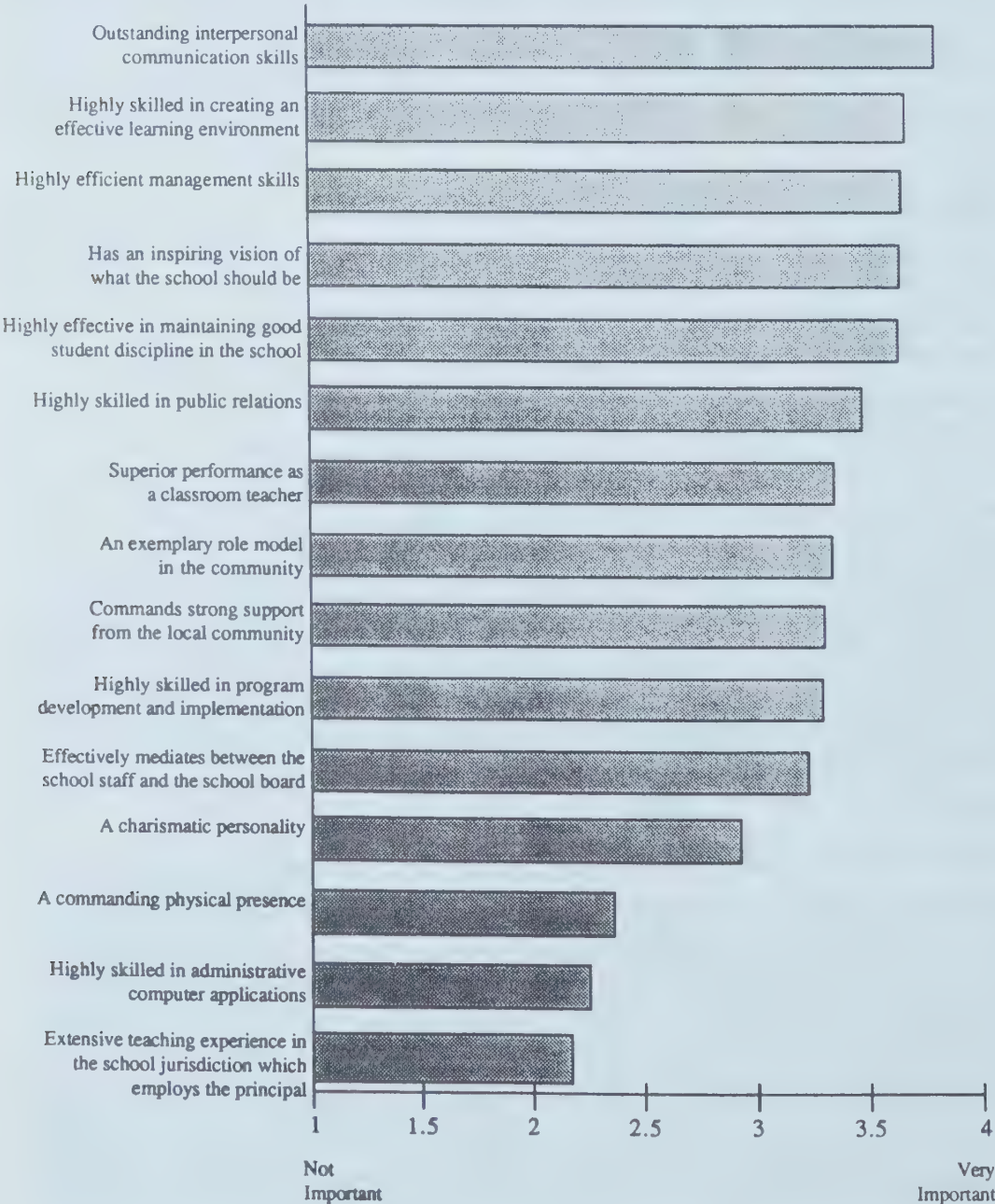


Figure 4: Desired characteristics of the principal (Northeastern Alberta and Provincial Studies)

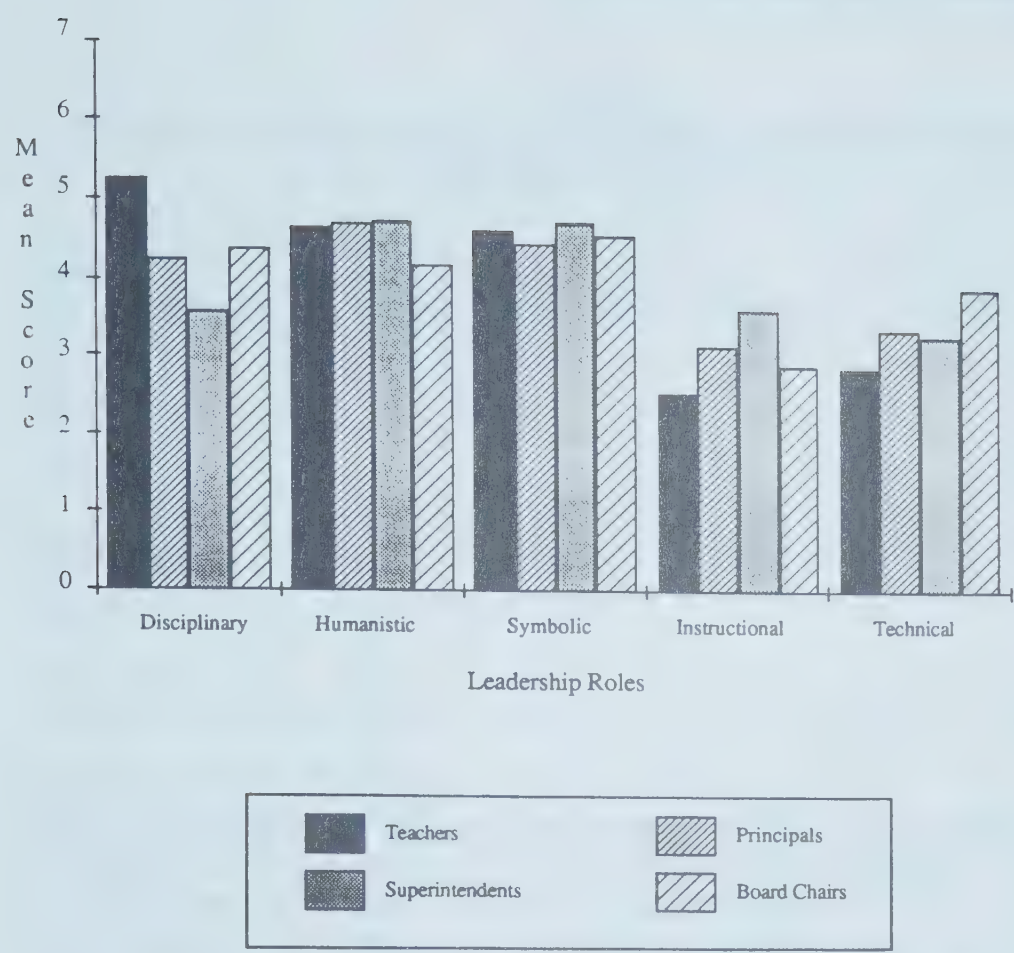


Figure 5: Strength of leadership role required of principals as perceived by all respondents (Northeastern Alberta and Provincial Studies)

Scheffé tests ($p \leq 0.05$) were performed where significant differences were found.

Teachers rated the *disciplinarian* as the most important overall; in fact, there was a significant difference between their rating of disciplinarian and the rating of each of the other three groups. Board chairs also rated the disciplinarian significantly higher than did superintendents. Superintendents rated the *instructional leader* as significantly more important than did teachers. Board chairs rated the *technical leader* as significantly more important than did teachers.

Principals and superintendents ranked the *humanistic* and *symbolic* leadership roles as the most important, giving these similar ratings as the most important, while board chairs had *disciplinary* and *symbolic* approximately tied as the most important. There were no significant differences between the groups on either *humanistic* or *symbolic* leadership roles.

To examine each of the respondent groups for differences between their ratings of the five leadership roles, a One-Way Analysis of Variance (repeated measures) was run for each of the four groups. Table 3 shows the significant differences between the five leadership roles for each of the four respondent groups (Scheffé, $p \leq 0.05$). Significant differences are indicated with a T, P, S, and B for teachers, principals, superintendents, and board chairs respectively.

TABLE 2
Significant Differences ($p \leq 0.05$) for Scheffé Comparisons of Leadership
Roles (All Respondents)

	Symbolic	Humanistic	Disciplinary	Technical	Instructional	Mean Score
Symbolic				*	*	4.62
Humanistic				*	*	4.54
Disciplinary				*	*	4.45
Technical	*	*	*			3.35
Instructional	*	*	*			3.04

It is interesting to note that the greatest number of significant differences was for teachers and superintendents (6), followed by board chairs (3), and principals (1). Looking at Figure 4 we see that the direction of these significant differences changes: teachers, for instance, find disciplinary leader significantly *more important* than either instructional or technical leader, while superintendents find disciplinary leader significantly *less important* than either symbolic or humanistic leader.

It is also interesting to note that all groups with the exception of principals rated the instructional leadership role as significantly less important than the symbolic: Teachers and board chairs rated it significantly less important than the disciplinary, and teachers and principals rated it significantly less important than the humanistic. A glance back at Figure 4 shows that, for instance, principals actually rated the difference between symbolic leader and instructional leader greater than did superintendents. Whereas the difference of lesser magnitude was significant for superintendents, the difference of greater magnitude was not significant for principals. Inspection of the data shows, for the group of principals, other such differences which were larger than for other groups. Due to the very small number of principals in the study, however, these differences did not achieve significance.

Summary of Findings

It seems that respondents do indeed want the principal to be a superhero who demonstrates a wide variety of skills and attributes. Twelve of the 15 behaviors or characteristics were seen by all respondents as important. It is interesting to take special note of the five most highly rated items; each of these provides a nice capsule description of one of the five leadership roles.

The data also clearly establish a leadership role for the principal pertaining to disciplinarian. At the same time, the data establish a distinctly lower priority for the instructional (and the technical) leadership role. Symbolic,

TABLE 3
Significant Differences for Scheffé Comparisons of Leadership Roles
(Four Groups of Respondents, $p \leq 0.05$)

	Symbolic	Humanistic	Disciplinary	Technical	Instructional
Symbolic			S	T,S	T,S,B
Humanistic			S	T,S	T,S,P,B
Disciplinary	S	S		T	T,B
Technical	T,S	T,S	T		
Instructional	T,S,B	T,P,S,B,	T,B		

disciplinary, and humanistic leadership roles are seen as having higher priority by respondents considered as a whole than the technical and instructional leadership roles. Teachers, in comparison with the other three respondent groups, attach greatest importance to the disciplinary role. Teachers rate this force as the highest, and their average score is significantly higher than those of the other three groups. Superintendents were the only group *not* to rate the instructional leadership role as the *lowest* in importance.

Interpretation of Findings

This study leads to two major conclusions about the role of the principal. First, stakeholders perceive the principal's role as being very broad. Incumbents are expected to have a very good command of a large number of skills and to demonstrate a large number of positive personal behaviors and characteristics. This expectation that the principal will be all things to all people leads to our image of the principal as a superhero or superheroine.

Second, of the five leadership roles rated most important, the establishment and maintenance of discipline in the school is seen as one of the three most important, with teachers rating it the most important. In view of the heavy emphasis in both academic and professional literature on the principal as instructional leader, it was interesting to find that in a forced-choice situation, teachers and board chairs rated the disciplinary role as significantly more important than the instructional leadership role. Superintendents, the group which rated the disciplinary role the lowest, rated it as similar in strength to the instructional leadership role.

We need to clarify what kind of disciplinary role we feel the respondents support. The fact that all four respondent groups gave high ratings to the humanistic role suggests an interpretation of the disciplinary role in humanistic terms. It seems that teachers want a "tight ship," but they want Mr. Chips rather than Captain Bligh at the helm. In keeping with this preference, we choose to see discipline as analogous to one of Herzberg's

“hygiene factors” (1966), that is, as a necessary precondition for satisfactory organizational life, a foundation on which to build high levels of performance. Discipline can be seen as so important and fundamental that it is not talked about, even by practitioners. Thus there is a silence in the interviews with regard to discipline, and the literature on the principalship speaks of it only in whispers. While there is tacit acknowledgment in the literature of the principal’s leadership role in discipline, our position is that models of school leadership such as that proposed by Sergiovanni do not adequately acknowledge the foundational character of school discipline in the totality of the principal’s leadership roles.

Conclusion

Our own findings and the literature on effective schools, on instructional leadership, and on discipline support the contention that firm and fair discipline is indeed a significant feature of effective schools. Its function is admittedly a supportive one—to maintain an orderly climate in which effective teaching and learning may flourish—but order and discipline nonetheless form a necessary foundation on which to build an effective school. As Purkey and Smith (1983) point out, “common sense alone suggests that students cannot learn in an environment that is noisy, distracting, or unsafe” (p. 445).

Despite the negative connotations of the word *discipline*, the need for order and stability in a school remains. Researchers whose major focus is on instructional leadership continue, in general, to place the burden for discipline on principals, whose leadership skills are seen as necessary for maintaining a peaceful and orderly school climate in which learning can flourish. Such researchers are also the ones who, in general, tend to use circumlocutions and to downplay the word *discipline*, while quietly admitting that it is an important component of effective schools. Those researchers who write specifically on discipline are less reticent about using the word, and they also stress that all members of a school community must cooperate in achieving order and discipline, and thereby effective teaching and learning, in schools. The literature is thus not exactly silent on the issue of discipline, but one has to listen closely to hear what it says.

The attention paid in this paper to the principal as disciplinarian may tend to make us lose sight of the primary fact that teachers, superintendents, and board chairs have enormous expectations of principals—as do principals themselves. The characteristics and behaviors called for by respondents in our three studies are indeed indicative of a superhero. It must also be remembered that establishing a foundation of discipline and order in a school is only one of the principal’s many duties. Distinctions among what emerged as the top five leadership roles were revealed only when respondents were forced to make choices. When they did, two groups emerged: a group of three (symbolic, humanistic, and disciplinary), which were seen as significantly more important than a group of two (instructional and technical). All five of these leadership roles still assumed major importance, however.

It is clear from the importance attached to the humanistic and symbolic leadership roles that respondents in our three studies do not want their principals to carry a "big stick" but rather to use a fair and firm approach to discipline—all the while carrying out their many other duties with efficiency, excellence, and panache. The old shadow of the principal as disciplinarian is still there, though in a revised form which is much more humanistic. The new, polished image of the principal has many facets, one of which is disciplinary leadership.

Our experience in following up a secondary finding which emerged unexpectedly leads us to make a methodological point: that educational researchers should remain open to possibilities suggested by serendipitous research findings. Conclusions must, of course, be tied to research questions, but rather than ignoring unexpected findings we might consider a serious follow-through on them. Our own follow-through on the disciplinary role of the principal is not by any means the final word on this subject. We hope that future researchers, especially in Canada, will not shy away from examining this area in much more detail.

Notes

1. The authors acknowledge the substantial contributions to this article made by the 22 graduate students, corporately known as Red Deer Outreach '86 and Vermilion Outreach '87, who were involved in these two research projects.
2. The term *leadership force* is not particularly to our liking. Although the term *leadership role* may suggest a singular style of leadership that would be misleading, we have used this term in preference to leadership force, with the understanding that an individual leader must balance several important aspects of leadership. Our definition of leadership role thus includes both the individual characteristics and the specific behaviors of a principal and is roughly equivalent to Sergiovanni's metaphorical term *leadership force*.
3. Scheffé tests ($p \leq 0.05$) were performed where significant differences were found. The significant differences are summarized as follows:
 - Teachers rated (a) *highly effective in maintaining good student discipline in the school* as significantly more important than did superintendents; (b) *effectively mediates between the school staff and the school board* as significantly more important than did each of the other three groups; (c) *extensive teaching experience in the school jurisdiction which employs the principal* as significantly more important than did each of the other three groups; (d) *a commanding physical presence* as significantly more important than did board chairs; and (e) *highly skilled in administrative computer applications* as significantly more important than did superintendents.
 - Board chairs rated (a) *an exemplary role model in the community* as significantly more important than did each of the other three groups; (b) *highly efficient management skills* as significantly more important than did principals or superintendents; and (c) *highly skilled in creating an effective learning environment* as significantly more important than did teachers.
 - Board chairs and superintendents rated (a) *has an inspiring vision of what the school should be* as significantly more important than did teachers; and (b) *outstanding interpersonal communication* as significantly more important than did principals and teachers.
 - Principals rated *commands strong support from the local community* as significantly more important than did each of the other three groups.
 - Superintendents rated *superior performance as a classroom teacher* as significantly more important than did teachers.
4. As we are dealing with ipsitive data, no main effect between groups could exist.

5. This is a revised version of a paper originally presented to the annual conference of the Canadian Association for the Study of Educational Administration, Canadian Society for the Study of Education, Hamilton, Ontario, June 1987.

References

- Alberta Education. (1985). *Partners in education: Principles for a new School Act*. (Proposals for amending the School Act and related legislation). Edmonton: Author.
- Burns, J.A. (1985). Discipline: Why does it continue to be a problem? Solution is in changing school culture. *NASSP Bulletin*, 69(479), 1-5.
- Center on Evaluation, Development and Research. (1984). *The role of the principal* (Hot Topics Series, No. 4). Bloomington, IN: Phi Delta Kappa.
- Clarke, S.C.T. (1977). *General report of the Alberta school discipline study 1975-76*. Edmonton: Alberta Education, Planning and Research.
- Crowson, R.L., & Porter-Gehrie, C. (1981). The urban school principalship: An organizational stability role. *Planning and Changing*, 12(1), 26-53.
- Ewanyshyn, E.L. (1986). *Control over educational decisions*. Unpublished doctoral dissertation, University of Alberta.
- Friesen, D., Holdaway, E.A., & Rice, A.W. (1984). Factors contributing to the job satisfaction of school principals. *Alberta Journal of Educational Research*, 30(3), 157-170.
- Gersten, R., Carnine, D., & Green, S. (1982). The principal as instructional leader: A second look. *Educational Leadership*, 40(3), 47-50.
- Grainger, R.A. (1984). *The participation of parents in local school decision-making*. Unpublished doctoral dissertation, University of Alberta.
- Gunn, J.A., & Holdaway, E.A. (1985). Principals' job satisfaction. *Canadian Administrator*, 24(7), 1-5.
- Herzberg, F. (1966). *Work and the nature of man*. Cleveland: World Publishing.
- Hubert, B.D., & Dueck, K.G. (1985). On-the-job training of assistant principals in selected tasks in the Calgary public school system. *Alberta Journal of Educational Research*, 31(4), 270-287.
- Jankovic, M.M. (1983). *Factors associated with school principals' experience of work-related stress*. Unpublished doctoral dissertation, University of Alberta.
- Jones, V. (1984). An administrator's guide to developing and evaluating a building discipline program. *NASSP Bulletin*, 68(471), 60-73.
- Krajewski, R.J. (1977). Texas principals—Implications for perceived roles. *NASSP Bulletin*, 61(413), 16-21.
- Leithwood, K.A., & Montgomery, D.J. (1986). *Improving principal effectiveness: The principal profile* (Research in Education Series No. 13, Ontario Institute for Studies in Education). Toronto, ON: OISE Press.
- Manasse, A.L. (1985). Improving conditions for principal effectiveness: Policy implications of research. *Elementary School Journal*, 85(3), 439-463.
- Morris, V.C., Crowson, R., Hurwitz, E., & Porter-Gehrie, C. (1982). The urban principal: Middle manager in the educational bureaucracy. *Phi Delta Kappan*, 63(10), 689-692.
- Mulhauser, F. (1983). Recent research on the principalship: A view from NIE. In *The role of the principal* (Center on Evaluation, Development and Research, Hot Topics Series, No. 4). Bloomington, IN: Phi Delta Kappa, 217-239.
- Nicholson, L.G., Stephens, R., Elder, R., & Leavitt, V. (1985). Safe schools: You can't do it alone. *Phi Delta Kappan*, 66(7), 491-496.
- Payne, C.H. (1987). *Parents and control of elementary school principal work behavior*. Unpublished doctoral dissertation, University of Alberta.
- Persell, C.H., & Cookson, P.W., Jr. (1982). The effective principal in action. In *The effective principal: A research summary* (pp. 22-29). Reston, VA: National Association of Secondary School Principals.
- Purkey, S.C., & Smith, M.S. (1983). Effective schools: A review. *Elementary School Journal*, 83(4), 427-452.
- Rallis, S.F., & Highsmith, M.C. (1986). The myth of the 'great principal': Questions of school management and instructional leadership. *Phi Delta Kappan*, 68(4), 300-304.
- Ratsoy, E.W., Sarros, J.C., & Aidoo-Taylor, N. (1986). Organizational stress and coping: A model and empirical check. *Alberta Journal of Educational Research*, 32(4), 270-285.

- Sackney, L.E. (1980). Administrative dilemmas of the principal. *Canadian Administrator*, 20(3), 1-5.
- Sarros, J.C., & Friesen, D. (1987). The etiology of administrator burnout. *Alberta Journal of Educational Research*, 33(3), 163-179.
- Sergiovanni, T.J. (1984). Leadership and excellence in schooling. *Educational Leadership*, 41(5), 4-13.
- Shoemaker, J., & Fraser, H.W. (1981). What principals can do: Some implications from studies of effective schooling. *Phi Delta Kappan*, 63(3), 178-182.
- Sudman, S., & Bradburn, N.M. (1983). *Asking questions: A practical guide to questionnaire design*. San Francisco: Jossey-Bass.
- Sweeney, J. (1982). Research synthesis on effective school leadership. *Educational Leadership*, 39(5), 346-352.
- Yukl, G. (1982). Managerial leadership and the effective principal. In *The effective principal: A research summary* (pp. 1-13). Reston, VA: National Association of Secondary School Principals.

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Perceptions of Control over Educational Decisions in Alberta

This article reports perceptions of control over educational decisions of an operational nature in four large, urban school districts in Alberta. A sample of 32 trustees, 77 central office administrators, and 64 randomly selected principals participated in this questionnaire study. Respondents were asked to indicate on a five-point Likert-type scale their perceptions of actual and preferred control over educational decisions by five organizational levels (teachers, principal's office, superintendent's office, school board, and Alberta Education). The results indicated that the principal's office, the superintendent's office, and the school board were perceived to have major control over most decision categories. Teachers and Alberta Education were perceived to have the least overall control. Similarly, the principal's office, the superintendent's office, and the school board were preferred to have major or shared control over most decision categories, while teachers and Alberta Education were preferred to have the least control. Overall, respondents were satisfied with the current distribution of control over educational decisions and favored only a few changes in some decision areas.

Changes in control over educational decisions reflect shifts in the balance of power, authority, and influence which occur from time to time at different organizational levels (Scott, 1981). In recent years there have been several developments in Alberta which may have had a significant impact on control over educational decisions. These include the growth of teacher professionalism, school-based budgeting, the Management and Finance Plan, and the Secondary Education Review, as well as the activities associated with the proposed revision of the School Act. Consequently, the patterns of control over educational decisions observed in earlier studies may no longer apply (Chung, 1985; Loudon, 1980; March, 1981; Renihan, 1977; Simpkins, 1968). This article reports on a study (Ewanyshyn, 1986) which examined current perceptions of control over educational decisions in four large urban school districts in Alberta.

Purpose and Plan

The study sought to determine the perceived degree of actual and preferred control over educational decisions exercised by persons working at various levels of the educational system: provincial, school board, superintendent, principal, and teacher. Two basic questions were addressed: (a) What is the

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overall degree of control over educational decisions exercised by each of the five organizational levels, according to the perceptions of trustees, superintendents, and principals? (b) What is the overall degree of preferred control over educational decisions at each of the five organizational levels?

A sample of 32 trustees, 77 central office administrators, and 64 randomly selected principals participated in this questionnaire study. In all, 152 questionnaires were returned, representing 88% participation. The focus of the questionnaire was on the perceptions of control over educational decisions in the operational sphere, as opposed to strategic policy decisions (e.g., School Act Revision). Questionnaire items were drawn from similar studies concerned with the distribution of power, authority, and influence over educational decisions (Chamberlain, 1975; Hoy & Sousa, 1984; March, 1981; Simpkins, 1968). Final selection and modification of items were carried out following a pilot study.

Ten categories of decisions were included in the questionnaire: (a) finance and budgeting; (b) capital expenditures; (c) equipment, supplies, and services; (d) curriculum and instruction; (e) personnel management; (f) student management; (g) organizational structure; (h) community relations; (i) implementation of new programs; and (j) policy and decision making. Four decision items were developed for each category, so that in all 40 decision items were identified. Respondents were asked to indicate on a five-point Likert-type scale their perceptions of actual and preferred control over educational decisions by five organizational levels (teachers, principal's office, superintendent's office, school board, and Alberta Education).

Findings

Overall Perceived Degree of Actual Control

Table 1 presents in rank order the perceived degree of actual control by organizational level for each decision item. The rank order of organizational levels from left to right indicates an increasing degree of control over the decision item. For example, regarding the first item (finance to a school), teachers (T) were perceived to have the lowest level of control, while the superintendent's office (S) and the school board (B) were tied for the highest level of control. The ranking by level was based on the percentage distribution of perceived actual control (IS) over educational decisions. Whenever two levels were perceived to have the same amount of control, a slash (/) was used to indicate that the levels were tied in rank order, although the "higher" organizational level was placed higher in ranking.

Table 2 provides a summary of the perceived degree of actual control over educational decisions by organizational level. The ranking shows how many times each level was listed in a particular position in the rank order. The mean was calculated by multiplying the frequency of the organizational level in a particular position by the value of the position in the rank order for all 40 items. The mean score thus indicates the overall perceived degree of actual control by the organizational level on a scale from one to five.

Principal's office. The organizational level with the highest mean score (3.73) was the principal's office (Table 2). It was perceived to have the

highest degree of actual control over 18 of the 40 decision items, more than any other organizational level. As indicated in Table 1, these items pertained to the following decision categories: (a) student management; (b) community relations; (c) policy and decision making; (d) finance and budgeting; (e) equipment, supplies, and services; (f) personnel management; and (g) organizational structure. The principal's office was perceived to have the highest degree of control over all four items in the student management category and over three items in each of the community relations and policy and decision making categories.

The principal's office was also perceived to have the second-highest degree of actual control over four decisions, two in each of two decision categories: (a) curriculum and instruction; and (b) organizational structure. It was perceived to have the least control over two decision items (deciding on curriculum content and the selection of a principal).

Superintendent's office. The superintendent's office (Table 2) had the second-highest mean score (3.48). It was perceived to have the highest degree of actual control over four of the 40 decision items. As indicated in Table 1, these items pertained to the following three decision categories: (a) personnel management; (b) capital expenditures; and (c) organizational structure.

In addition, the superintendent's office was perceived to have the second-highest degree of actual control over 17 decision items in the following categories: (a) new programs; (b) equipment, supplies, and services; (c) finance and budgeting; (d) capital expenditures; (e) policy and decision making; (f) curriculum and instruction; (g) personnel management; and (h) community relations. It was perceived to have the second-highest degree of actual control over all four items in the new programs category; over three items in the equipment, supplies, and services category; and over two items in each of the following categories: (a) finance and budgeting; (b) capital expenditures; and (c) policy and decision making. Also, the superintendent's office was perceived to have the second-lowest degree of control over only four decision items, less than any other organizational level in the two lowest positions of rank order.

School board. The school board (Table 2) had the third-highest mean score (3.28). It was perceived to have the highest degree of actual control over 13 of the 40 decision items. As indicated in Table 1, these items pertained to the following seven decision categories: (a) new programs; (b) capital expenditures; (c) finance and budgeting; (d) equipment, supplies, and services; (e) curriculum and instruction; (f) community relations; and (g) policy and decision making. The school board was perceived to have the highest degree of actual control over all four items in the new programs category and over two items in finance and budgeting.

In addition, the school board was perceived to have the second-highest degree of actual control over five decision items in the following four categories: (a) personnel management; (b) capital expenditures; (c) organizational structure; and (d) community relations. It was perceived to have the least control over four decision items.

TABLE 1
Rank Order of Perceived Degree of Actual Control by Organizational Level

Decision Items	Item No.	Low			High	
		1	2	3	4	5
<i>Finance and Budgeting</i>						
Finance to a school	1	T	P	D	S /	B*
Finance in a school	2	B	S /	D	T	P
Finance of new programs	3	D	T	P	S	B
Additional finance	4	D	B	S	T	P
<i>Capital Expenditures</i>						
Building changes	5	T	P	D	S	B
School closure	6	T	P /	D	S	B
Special features	7	T /	D	P	B	S
Special schools	8	T	P	D	S	B
<i>Equipment, Supplies, and Services</i>						
Textbooks	9	B	P	S	T	D
Transportation	10	T	P	D	S	B
Major equipment	11	D	T	B	S	P
Classroom furnishings	12	D	B	T	S	P
<i>Curriculum and Instruction</i>						
Instructional methods	13	D	B	S	P	T
Curriculum content	14	P	B	S	T	D
Final marks	15	S	B /	D	P	T
Program evaluation policies	16	T	D	P	S /	B
<i>Personnel Management</i>						
Selection of a principal	17	P /	D	T	B	S
Selection of a teacher	18	D	T	B	S	P
Teaching assignments	19	B /	D	S	T	P
Teacher evaluation	20	T /	D	P	B	S
<i>Student Management</i>						
Student conduct	21	D	S	B	T	P
Student assessment	22	D	B	S	T	P
Student reporting	23	D	B	S	T	P
School discipline	24	D	B	S	T	P
<i>Organizational Structure</i>						
Number of teachers	25	T	D	B	P	S
School timetable	26	B /	D	S	T	P
Instructional time	27	T	B	S	P	D
Class size	28	D	T	S	B	P

*T = Teachers, P = Principal's Office, S = Superintendent's Office, B = School Board, D = Alberta Education Department

/ = Tie in Rank Order

TABLE 1 (continued)

Decision Items	Item No.	Low					High
		1	2	3	4	5	
<i>Community Relations</i>							
Parental involvement	29	D	S / B	T	P		
Community use of a school	30	T / D	S	B	P		
Parent advisory committee	31	D	B	S	T	P	
School achievement	32	D	T	P	S	B	
<i>New Programs</i>							
Implementation of pilot	33	D	T	P	S	B	
Continuation of pilot	34	T	D	P	S	B	
Language program	35	D	T	P	S	B	
Special education	36	T	D	P	S	B	
<i>Policy and Decision Making</i>							
School district policies	37	T	P / D	S	B		
School philosophy	38	D	S	B	T	P	
Teacher participation	39	D	B	T / S	P		
School policies	40	D	B	S	T	P	

TABLE 2
Summary of the Perceived Degree of Actual Control over Decisions by
Organizational Level

Organizational Level	Frequency of rank order					Overall Mean
	1	2	3	4	5	
Principal's Office (P)	2	7	9	4	18	3.73
Superintendent's Office (S)	1	4	14	17	4	3.48
School Board (B)	4	12	6	5	13	3.28
Teachers (T)	14	7	3	14	2	2.58
Education Department (D)	19	10	8	-	3	1.95

Teachers. Teachers (Table 2) had the second-lowest mean score (2.58). Teachers were perceived to have the highest degree of actual control over only two of the 40 decision items. As indicated in Table 1, these two decision items pertained to the curriculum and instruction decision category. In addition, teachers were perceived to have the second-highest degree of actual control over 14 decision items: all four items in student management; two items in finance and budgeting; community relations; and policy and decision making. Also, they were perceived to have the least control over 14 decisions.

Alberta Education. Of the five organizational levels, Alberta Education was perceived to have the lowest mean score (1.95) on the degree of actual control (Table 2). It was perceived to have the highest degree of actual control over only three of the 40 decision items. As indicated in Table 1, each of the three items pertained to one of the following three decision categories: (a) equipment, supplies, and services; (b) curriculum and instruction; and (c) organizational structure. It was perceived to have the least control over 19 decisions, more than any other organizational level.

Discussion

These results are not surprising and appear to confirm that control over many educational decisions has shifted recently to the principal's office. For instance, one of the school districts studied adopted school-based budgeting more than five years ago. More recently, school-based staffing was adopted by two of the districts.

Overall, the principal's office was perceived to have a relatively high degree of actual control over all but one decision category, namely capital expenditures. The perceived degree of control by the principal's office exceeded that of the superintendent's office in six of the ten decision categories: (a) finance and budgeting; (b) curriculum and instruction; (c) student management; (d) organizational structure; (e) community relations; and (f) policy and decision making. The superintendent's office, however, was perceived to have greater control than the principal's office over the following decision categories: (a) capital expenditures; (b) equipment, supplies, and services; (e) personnel management; and (d) new programs. The school board was perceived to have a high degree of control over many of the same decision categories as the superintendent's office. Only two decision categories, student management and curriculum and instruction, were not controlled to any great extent by the school board.

Regarding teachers, the results might be expected because teachers work at the organizational level most directly involved in delivering services to the students. As a group, teachers were perceived to have a high degree of control over student management, curriculum and instruction, and policy and decision making. The results also might be predictable regarding Alberta Education because this study largely dealt with operational decision making, that is, matters pertaining to the day-to-day operations of schools.

Overall Degree of Preferred Control

Table 3 presents in rank order the degree of preferred control by organizational level for each decision item. The rank order of organizational levels from left to right indicates an increasing degree of control over the decision item. For example, regarding the first item (finance to a school), Alberta Education (D) had the lowest preferred control, while the superintendent's office (S) and the school board (B) were tied for the highest preferred control. The ranking by level was based on the percentage distribution of preferred control (should be) over educational decisions. Whenever two levels were favored to have the same extent of control, a slash (/) was used

to indicate that the levels were tied in rank order, although the “higher” organizational level was placed higher in ranking.

Table 4 provides a summary of the preferred control over educational decisions by organizational level. The ranking shows how many times each level was listed in a particular position in the rank order. The mean was calculated in the same way as described previously to determine the perceived degree of actual control (Table 2). The mean score thus indicates the overall degree of preferred control by the organizational level on a scale from one to five.

Principal's office. The organizational level with the highest mean score (3.88) was the principal's office (Table 4). It had the highest degree of preferred control over 17 of the 40 decision items, more than any other organizational level. As indicated in Table 3, these items pertained to the following decision categories: (a) student management; (b) community relations; (c) policy and decision making; (d) finance and budgeting; (e) personnel management; (f) organizational structure; and (g) equipment, supplies, and services.

Similar to the perceived degree of actual control, it was preferred that the principal's office have the highest degree of control over all four items in the student management category and over three items in each of the community relations and policy and decision making categories. Moreover, the principal's office was preferred to have the second-highest degree of control over six decisions, including two in curriculum and instruction.

Superintendent's office. The superintendent's office (Table 4) had the second-highest mean score (3.45). It was preferred to have the highest degree of control over eight of the 40 decision items. As indicated in Table 3, these items pertained to the following six decision categories: (a) personnel management; (b) new programs; (c) equipment, supplies, and services; (d) curriculum and instruction; (e) organizational structure; and (f) community relations. The superintendent's office was preferred to have the highest degree of control over two items each in personnel management and new programs.

In addition, the superintendent's office was preferred to have the second-highest degree of control over 11 decision items in the following categories: (a) finance and budgeting; (b) capital expenditures; (c) equipment, supplies, and services; (d) new programs; (e) personnel management; (f) organizational structure; and (g) policy and decision making. Respondents did not prefer the superintendent's office to have the least control over any decision items.

School board. The school board (Table 4) had the third-highest mean score (3.15). It was preferred to have the highest degree of control over ten of the 40 decision items. As indicated in Table 3, these items pertained to the following five decision categories: (a) capital expenditures; (b) finance and budgeting; (c) new programs; (d) equipment, supplies, and services; and (e) policy and decision making. The school board was preferred to have the highest degree of control over all four items in the capital expenditures

category; and over two items each in finance and budgeting and new programs.

In addition, the school board was preferred to have the second-highest degree of control over seven decision items in the following five categories: (a) community relations; (b) new programs; (c) curriculum and instruction; (d) personnel management; and (e) organizational structure. It was preferred to have the least control over six decision items.

Teachers. Teachers had the second-lowest mean score (2.75) of any organizational level (Table 4) on the degree of preferred control. They were preferred to have the highest degree of control over only two of the 40 decision items. As indicated in Table 3, these two decision items pertained to the curriculum and instruction decision category. In addition, teachers were preferred to have the second-highest degree of control over 15 decision items including all four items in student management, three items in policy and decision making, and two items each in finance and budgeting, and community relations. Teachers were preferred to have the least control over nine decisions.

Alberta Education. Alberta Education had the lowest mean score (1.78) on the degree of preferred control (Table 4). It was preferred to have the highest degree of control over only three of the 40 decision items. As indicated in Table 3, each of the three items pertained to one of the following three decision categories: (a) equipment, supplies, and services; (b) curriculum and instruction; and (c) organizational structure. Alberta Education was preferred to have the second-highest degree of control over one decision item in the capital expenditures category. Finally, Alberta Education was preferred to have the least control over 24 decisions, more than any other organizational level.

Discussion. Overall, the results indicated that major control over most decisions was preferred to be held by the principal's office, the superintendent's office, and the school board, while teachers and Alberta Education were preferred to have the least control over most decision categories.

In general, the overall perceived degree of actual and preferred control by the principal's office, the school board, teachers, and Alberta Education were similar for most decision categories. However, the findings suggest that respondents desired to see some changes with respect to control over specific educational decisions by the superintendent's office, that is, less control over some decisions but greater control over others.

Implications

Leadership of the principal's office. The high degree of perceived control by the principal's office suggests that the role of the principal is changing; new opportunities exist for a principal to exercise increasing leadership in education. In reviewing the effective-schools movement, Sackney (1986, p. 15) suggested that "bottom-up, school-specific change efforts" require a participatory or democratic approach that involves a high degree of staff collaboration, group planning, and shared decision making. Principals may

TABLE 3
Rank Order of Preferred Control by Organizational Level

Decision Items	Item No.	Low				High
		1	2	3	4	5
<i>Finance and Budgeting</i>						
Finance to a school	1	D	T	P	S /	B*
Finance in a school	2	B	S	D	T	P
Finance of new programs	3	D	T	P	S	B
Additional finance	4	D	B	S	T	P
<i>Capital Expenditures</i>						
Building changes	5	T	D	P	S	B
School closure	6	T	P /	D	S	B
Special features	7	D	T	S	P	B
Special schools	8	T	P	S	D	B
<i>Equipment, Supplies, and Services</i>						
Textbooks	9	B	S	P	T	D
Transportation	10	T	P	D	S	B
Major equipment	11	D	B	T	S	P
Classroom furnishings	12	D	B	T /	P	S
<i>Curriculum and Instruction</i>						
Instructional methods	13	B /	D	S	P	T
Curriculum content	14	B	S	P	T	D
Final marks	15	B	S	D	P	T
Program evaluation policies	16	D	T	P	B	S
<i>Personnel Management</i>						
Selection of a principal	17	P /	D	T	B	S
Selection of a teacher	18	T /	D	B	S	P
Teaching assignments	19	B /	D	S	T	P
Teacher evaluation	20	D	T	B	P	S
<i>Student Management</i>						
Student conduct	21	D	S	B	T	P
Student assessment	22	D	B	S	T	P
Student reporting	23	D	B	S	T	P
School discipline	24	D	S /	B	T	P
<i>Organizational Structure</i>						
Number of teachers	25	D	T	B	P	S
School timetable	26	D	B	S	T	P
Instructional time	27	T	B	P	S	D
Class size	28	D	T	S	B	P

*T = Teachers, P = Principal's Office, S = Superintendent's Office, B = School Board, D = Alberta Education Department

/ = Tie in rank order

TABLE 3 (continued)

Decision Items	Item No.	Low					High
		1	2	3	4	5	
<i>Community Relations</i>							
Parental involvement	29	D	S	B	T	P	
Community use of a school	30	D	T	S	B	P	
Parent advisory committee	31	D	S	B	T	P	
School achievement	32	T	D	P	B	S	
<i>New Programs</i>							
Implementation of a pilot	33	D	T	P	B	S	
Continuation of a pilot	34	D	T	P	B	S	
Language program	35	T	D	P	S	B	
Special education	36	T	D	P	S	B	
<i>Policy and Decision Making</i>							
School district policies	37	D	T /	P	S	B	
School philosophy	38	D	S	B	T	P	
Teacher participation	39	D	B	S	T	P	
School policies	40	D	B	S	T	P	

TABLE 4

Summary of the Preferred Control over Decisions by Organizational Level

Organizational Level	Frequency of rank order					Mean
	1	2	3	4	5	
Principal's Office (P)	1	3	13	6	17	3.88
Superintendent's Office (S)	0	9	12	11	8	3.45
School Board (B)	6	9	8	7	10	3.15
Teachers (T)	9	11	3	15	2	2.75
Education Department (D)	24	8	4	1	3	1.78

enhance school effectiveness by increasing the participation of teachers, parents and other stakeholder groups in the process of decision making.

Some respondents felt that the principal's office had more control over finance and budgeting at the school level than was preferred. Trustees and administrators, however, felt that principal should have more control over capital expenditures and personnel management. The principal's control over some decision areas may well continue to increase, but it may be curtailed in others. There might also be a need for school districts to consider adopting new approaches to gain control over decision areas to counteract

inertia and maintain a proper balance. A high concentration of control at one organizational level may reduce the balance of control in the educational system and increase resistance to change and innovation.

In view of the high degree of control by the principal's office over operational decisions, it is important for school districts to ensure that checks and balances exist. Peterson (1984) identified six mechanisms of administrative control over managers in educational organizations, four of which were hierarchical, one social, and one extraorganizational. The four hierarchical controls were supervision, input control (resources), behavior control (structuring of activities), and output control (monitoring and evaluation). The other two controls were selection-socialization (ongoing training) and environmental control (need for community support). It may be increasingly important for school districts to ensure that principals work toward achieving school district objectives and that they are held accountable for their activities. As a public enterprise, education is too important to be dominated by one organizational level.

With respect to school-based staffing, the principal should respond appropriately to school district objectives, the needs of school programs, and the needs of the community, while avoiding the temptation to make decisions on the basis of administrative or political expediency. The selection and assignment of a teacher should be based primarily on the needs of the instructional program, rather than on the needs of an extracurricular program. In addition, school-based staffing requires a mechanism for the placement of teachers who have experienced some difficulties in a particular school situation and may need a change to a more appropriate assignment.

There are times, though infrequently, when a principal's desire to make a decision might be curtailed in the best interests of the whole district. For example, the assignment of a teacher to a position appropriate to his or her qualifications and experience might well be a school system priority. It may be vitally important for maintaining high teacher morale in the district or maintaining high instructional standards, even though such a decision might be contrary to a principal's preference. Similarly, under special circumstances, such as the implementation of new programs, upholding school district priorities might be more important than maintaining a principal's autonomy in a particular case or decision area.

Decentralization of control. If a principal is wise in using the powers of the office, he or she will actively seek the advice and guidance of all stakeholders. The literature supports the participation of teachers in the decision making process whenever it is desirable (Hoy & Sousa, 1984; Owens, 1981; Scott, 1981). Yet the results of this study offer some support to the view of Meyer and Rowan (1983) that teacher professionalism (autonomy) is largely a myth except in matters pertaining to the classroom. While it may not be desirable to mandate a participatory style for principals, superintendents might encourage principals to share their power with stakeholder groups. Opportunities to participate in decision making, when-

ever it is desirable for both teachers and parents, could increase the effectiveness of decision making in a school.

Role of the school board. The least desirable consequence of the high degree of control by the principal's office would be the abdication by the board of trustees of its duties and responsibilities. As the elected body responsible for policy making and fiscal and budgetary approval, the school board serves as the final authority at the local level on all school matters. It must ensure that all school district services are provided on a fair and equitable basis to all groups and individuals within the district.

Accordingly, school boards might adopt various methods for keeping principals on a course of action established by board policy. Board policies should give direction to the whole district and provide a framework for principals to work within. Such policies should direct the principal to be proactive in seeking and maintaining community support. Most important, appropriate mechanisms and communication networks need to be developed within the school community. Adequate monitoring and follow-up activities need to be carried out by principals and central office administrators, if accountability to the school board and the community are to be met.

On balance, trustees should avoid getting too closely involved with administrative or operational matters, yet they should recognize and accept the need to get involved in matters of grievance or appeal requiring political decisions. In this regard, it is important to define the general spheres of influence or powers of trustees and administrators. Overall, the increase in control by the principal's office need not be granted at the expense of the school board. Perhaps the real danger is the perception on either side that a gain for one group means a loss of power for the other.

Role of the superintendent. The decentralization of control to the school level has major implications for the role of the superintendent. First, the superintendent's office might serve as an effective link between school programs and the school board. Second, it might ensure that appropriate mechanisms exist for policy making, decision making, and policy implementation. Third, superintendents need to consider how their leadership behavior or management style might enhance or impede organizational effectiveness. Fourth, superintendents need to consider how accountability might be built into various levels of the total system.

In discussing organizational leadership from the perspective of the superintendent, Pitner and Ogawa (1981) found that the superintendent's work largely involved two broad areas of activity: communicating and exerting an organizational influence within the constraints of social and organizational structures. They also challenged conventional views of leadership and reported that broad contextual influences, societal, and extraorganizational factors, have a major impact on superintendent performance. Such factors define the "docile" dimensions of leadership, according to Pitner and Ogawa (p. 62).

At a practical level, the superintendent's office may have to break with traditional decision making approaches. For instance, it might rely less on

hierarchical authority and adopt various models (joint decision making, consensus, collegial model, delegation of authority) to facilitate decision making processes, even in a time of considerable organizational uncertainty and scarcity of resources. Such a course of action would be consistent with the views of Thompson (1967) and Hasenfeld (1983), who argued that educational organizations operate with less emphasis on formal hierarchy than other organizations. It would also be consistent with higher expectations for participation in educational decision making (Cox & Wood, 1980; Hoy & Miskel, 1978). Failure of the superintendent's office to implement democratic and participatory approaches to school decision making might indeed have serious consequences for a school district.

Concluding Comments

Overall, respondents were satisfied with control over educational decisions and preferred few changes. The results of this study, however, indicate that trustees and administrators preferred changes in some decision areas. They felt that the principal's office should have more control over capital expenditures and personnel management, but less control over finance and budgeting. They also felt that teachers should have more control over four decisions areas: personnel management, student management, community relations, and policy and decision making. However, they preferred that the provincial education department should have less control over finance and budgeting, capital expenditures and equipment, supplies and services.

Because this study was delimited to the urban context in Alberta, the results might well be different in another setting. Therefore, caution should be exercised in interpreting or explaining control over educational decisions in Alberta only on the basis of this study.

References

- Chamberlain, J.L. (1975). *The opinions of teachers and principals on teacher participation in decision making*. Unpublished doctoral dissertation, University of Oregon.
- Chung, C. (1985). *Perceptions and preferences of teachers for the distribution of decision-making authority in schools*. Unpublished doctoral dissertation, University of Alberta.
- Cox, H., & Wood, J.R. (1980). Organizational structure and professional alienation: The case of public school teachers. *Peabody Journal of Education*, 1(6).
- Ewanyshyn, E.L. (1986). *Control over educational decisions*. Unpublished doctoral dissertation, University of Alberta.
- Hasenfeld, Y. (1983). *Human service organizations*. Englewood Cliffs, NJ: Prentice-Hall.
- Hoy, W.K., & Miskel, C.G. (1978). *Educational administration: Theory, research, and practice*. New York: Random House.
- Hoy, W.K., & Sousa, D.A. (1984). Delegation: The neglected aspect of participation in decision making. *Alberta Journal of Educational Research*, 30(4), 320-331.
- Louden, L.W. (1980). *Administrative decision making in schools*. Unpublished doctoral dissertation, University of Alberta.
- March, M.E. (1981). *Variations in degree of control over educational decisions*. Unpublished doctoral dissertation, University of Alberta.
- Meyer, J., & Rowan B. (1983). Organizational environments. In J. Meyer & W. Scott (Eds.). Beverly Hills, California: Sage.
- Owens, R.G. (1981). *Organizational behavior in education*. Englewood Cliffs, NJ: Prentice-Hall.
- Peterson, K.D. (1984). Mechanisms of administrative control over managers in educational organizations. *Administrative Science Quarterly*, 29, 573-597.

- Pitner, N.J., & Ogawa, R.T. (1981). Organizational leadership: The case of the school superintendent. *Educational Administration Quarterly*, 17(2), 45-65.
- Renihan, P.J. (1977). *Control dimensions and school board decision emphases*. Unpublished doctoral dissertation, University of Alberta.
- Sackney, L. (1986). Practical strategies for improving school effectiveness. *Canadian School Executive*, 6(4), 15-20.
- Scott, W.R. (1981). *Organizations: Rational, natural, and open systems*. Englewood Cliffs, NJ: Prentice-Hall.
- Simpkins, W.S. (1968). *The distribution of decision-making authority in the school*. Unpublished doctoral dissertation, University of Alberta.
- Thompson, J.D. (1967). *Organizations in action*. New York: McGraw-Hill.

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Relationships Among Teachers' and Students' Thinking Skills, Sense of Efficacy, and Student Achievement

This study examined relationships between and among teachers' and students' sense of efficacy, thinking skills, and student achievement. Twenty-four teachers were selected from all grade 3 and 6 teachers in three school districts on the basis of their sense of personal and teaching efficacy scores. The teachers and their students completed a test of reasoning skills and an efficacy scale at the beginning and end of the school year. Students also completed the Canadian Achievement Tests and a measure of their teachers' classroom behavior; teachers were also interviewed at the beginning and end of the year. Relationships among student thinking, efficacy, and achievement were clearly demonstrated. Relationships between teacher and student measures were ambiguous but suggested that teachers' personal efficacy beliefs at the beginning of the year do affect student achievement, particularly at the grade three level. Factors affecting sense of efficacy were examined, and there was some indication that higher efficacy teachers tend to have a more pragmatic philosophical orientation toward teaching.

Two concepts receiving increasing attention in recent research on teaching and learning are teachers' sense of efficacy, which "refers to the extent to which teachers believe that they have the capacity to affect student performance" (Ashton, 1984, p. 28), and the development of thinking skills. There is reason to believe that teachers with high efficacy beliefs behave and think differently in the classroom than do teachers with low efficacy beliefs, and that this behavior results in greater student achievement (Ashton & Webb, 1986). There is also the belief that "the purpose which runs through and strengthens all other educational purposes—the common thread of education—is the development of the ability to think" (Morgenstern & Renner, 1984, p. 639).

The construct of self-efficacy was initially proposed by Bandura in 1977. Bandura hypothesized that people's behavior is determined not only by their generalized beliefs about action-outcome relationships (a belief that certain behaviors can lead to certain outcomes), but also by their sense of self-efficacy (a belief that they have the requisite skills to produce those out-

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comes). Teachers' sense of efficacy was first conceptualized in two Rand Corporation studies evaluating 100 United States federal programs. The authors concluded that teachers' sense of efficacy was one of the best predictors of "percentage of project goals achieved; amount of teacher change; improved student performance; and continuation of both project methods and materials" (cited in Denham & Michael, 1981, p. 45).

In these studies, sense of efficacy seemed to reflect the extent to which teachers believe they have the capacity to affect student performance. In their description of the construct of sense of efficacy, Denham and Michael (1981) suggest that one way to interpret the findings of these studies is to "argue that teachers who maintain that they are able to teach students do, indeed, manage to teach them" (p. 45). Sense of efficacy is thought to be an intervening variable influencing teachers' actions, and is presumed to encompass both a belief in action-outcome relationships and personal perceptions of one's own ability to influence those outcomes.

In their review of the efficacy literature, Denham and Michael identified a number of consequences of sense of efficacy in addition to those of improved student achievement. From the research relating sense of efficacy to teacher behaviors, for example, they concluded that "teachers reporting a low sense of efficacy did indicate a preference for custodial control more often than did teachers with an average or high sense of efficacy" (p. 48). Also "teacher sense of efficacy is one of the variables related to the drop-out of teachers" (p. 49). Similarly, Glickman and Tamashiro (1982) identified significant relationships between sense of efficacy and teacher survival rate. Practicing first- and fifth-year teachers revealed a stronger sense of efficacy than did former teachers. Evans and Tribble (1986) identified a significant correlation between efficacy scores and commitment to teaching in preservice teachers. Wise, Darling-Hammond, McLaughlin, and Bernstein (1985) concluded that

A sense of efficacy is an important element of the link between knowledge and behavior. This sense affects performance by generating coping behavior, self-regulation of refractory behavior, perseverance, responses to failure, growth of intrinsic interest and motivation, achievement strivings, and career pursuits (p. 69).

Gibson and Dembo (1984) developed a 30-item scale to measure the construct of teacher efficacy. Their research addressed three issues: (a) to identify the dimension of teacher efficacy and relate these to Bandura's concept of self-efficacy; (b) to differentiate teacher efficacy from other constructs; and (c) to examine whether high and low efficacy teachers exhibit differential patterns of behaviors in the classroom. They identified two clearly differentiated factors. The first was a sense of personal teaching efficacy, that is, the teacher's sense of personal responsibility in student learning and/or behavior, which corresponds to Bandura's self-efficacy dimension. The second factor "represented the teachers' sense of teaching efficacy, or belief that any teacher's ability to bring about change is significantly limited by factors external to the teacher, such as the home environment, family background and parental influences" (p. 574). This second factor clearly corresponds to Bandura's outcome expectancy dimension. Their results also

verified a distinction between teacher efficacy and two other constructs (verbal ability and flexibility) already identified in the research as present in effective teachers, and “lent validation support for the use of the teacher efficacy scale to measure the construct of teacher efficacy” (p. 576).

Using an ethnographic observational and interview approach, Ashton and Webb (1986) studied efficacy in two Florida schools over a period of two years. The authors define efficacy as “teachers’ situation—specific expectations that they can help students learn” (p. 3), but suggest also that it is important to distinguish between the two dimensions—a belief that teachers can help students learn, and the belief that they personally can help students learn. In their chapter discussing the relationships between sense of efficacy and student achievement, Ashton and Webb state:

Our findings strongly support the hypothesis that teachers’ sense of efficacy is related to student achievement. Furthermore, the results support the assumption that teacher’s efficacy attitudes are situation-specific.... Efficacy beliefs are not unidimensional and, consequently, can be expected to have different relationships to different subject matter, depending on teachers’ beliefs about the subject being taught and the students in the class. (pp. 138-139)

In their final statement the authors conclude “that the promotion of a high sense of efficacy in teachers and students must become an educational aim as important as academic achievement” (p. 176).

Investigation into the nature and teaching of “thinking” has received much attention since the early 1970s. There has been rapid growth in the number of programs designed to teach thinking skills, and the instruments for measuring these skills are even more numerous. One of the early researchers in this field was Lipman (1983) who, in 1970, studied two randomized groups of fifth graders at Rand School in Montclair, N.J. After nine weeks, the groups who had been taught specific reasoning skills had gained 27 months in mental age on logical reasoning. Shortly thereafter the Philosophy for Children movement emerged as a promising approach to the teaching of thinking skills.

Stimulated by Lipman’s work, other experimental studies followed. In 1975 the Newark experiment conducted by Haas (1975) indicated that over ten months the experimental students in grades 5 and 6 who had been taught thinking skills on the Lipman model gained eight months on the Metropolitan Achievement Test reading comprehension subtest, in contrast with five months gain for the control group. Shipman (1978) demonstrated that after one year of teacher training and implementation of a thinking skills program, significant improvement in formal reasoning occurred in three out of four grade levels. Simon (1981), using Philosophy for Children materials, found them to be effective with emotionally handicapped children. In 1978 Cinquino tested 53 academically talented students using Philosophy for Children materials and identified positive results in achievement comparing pretests and posttests.

Thus it has been demonstrated that there are relationships between teachers’ sense of efficacy and student achievement, but that these relationships may be subject- and/or context-specific. Relationships between think-

ing skills and student achievement have been clearly demonstrated. However, these studies are relatively new, and none of this research has been conducted in Canada. Also, there are large “gaps” in the research. None of the research has examined the effects of teachers’ sense of efficacy on students’ thinking skills or students’ beliefs about the effects of their own efforts; nor have any of the studies examined the effects of teachers’ thinking skills on these outcomes.

Purpose of the Study

The major purpose of this study was to examine the relationships among sense of efficacy, thinking skills, and student achievement. Specific research questions were

1. What is the relationship between teachers’ sense of efficacy and their scores on a thinking/reasoning test?
2. What are the relationships among students’ sense of efficacy, student achievement, and student scores on a thinking/reasoning test?
3. What is the relationship between teachers’ sense of efficacy and (a) student achievement, (b) student scores on a thinking/reasoning test, and (c) students’ sense of efficacy?
4. What is the relationship between teachers’ scores on a thinking/reasoning test and (a) student achievement, (b) student scores on a thinking/reasoning test, and (c) students’ sense of efficacy?
5. Which of the study variables are the best predictors of student achievement and students’ thinking/reasoning skills?
6. What are some of the factors which influence teachers’ sense of efficacy?

Method

Measures

Teachers’ sense of efficacy was assessed by the 16-item scale created and validated by Gibson and Dembo (1984). The scale has an internal reliability score of .78 for the personal dimension of efficacy, .75 for the teaching dimension, and .79 for the total of the 16 items. Because no appropriate measure of pupils’ sense of efficacy was found, a four-item measure was developed by the researchers. Using the Rand items as a basis, but changing the wording to be more appropriate for elementary school children, two Likert items were designed to measure the students’ beliefs about whether most students can learn if they really try hard, and two addressed their beliefs about the pay-off of their own efforts. These items were as follows:

1. Most kids can do well in school if they work and study hard.
2. When I really try hard I get good grades in school.
3. If I get a better grade than usual on an assignment it’s probably because I got lucky.
4. Sometimes kids can’t get good grades no matter how hard they work and try.

Both teachers' and students' thinking skills were measured by the New Jersey Test of Reasoning Skills (NJTRS, 1983). The selection of this instrument for measuring thinking skills was based on the following considerations. This test concentrates on reasoning in language; it is simple and clearly written; and the skills tested are those which correspond to elementary and essential operations in the domain of logic. The reliability of the NJTRS compares favorably with established tests, ranging from .84 and above in grade 5 to .91 and above in grade 7. It has also been used with adults in spite of the rather juvenile content of the items (Lipman, personal communication, April 8, 1986).

The wide range of reasoning skills tested in the NJTRS made it the instrument of choice over others. The 28 skills identified range from basic syllogistic logic, through questioning strategies, to transitive and symmetrical relationships. The fact that this particular test of thinking skills was a product of the Philosophy for Children movement resulted in a wider interpretation of the term "thinking" than other tests allowed.

Student achievement was measured by the Canadian Achievement Tests Levels 12, 13, and 16. These tests are widely used in Canada by local school jurisdictions to assess student achievement in various language and mathematics skills and are routinely used by one of the school jurisdictions in the study.

Students' perceptions of their teachers' classroom behavior was assessed by Our Class and Its Work (OCIW, Waxman & Eash, 1983). The authors concluded that "students' judgments about their teachers' behavior agree significantly with the judgments of experienced classroom observers" (p. 321). The OCIW predicted student achievement gains and discriminated between teachers whose students obtained higher and lower levels of achievement and between teachers who received higher and lower ratings from their principals. Total test reliability is .85 (Cronbach's Alpha); reliability coefficients of the various subscales ranges from .84 to .92 (Waxman & Eash, 1983, p. 322). In addition, the test offers a considerable advantage over observational techniques in terms of economy and efficiency.

Interviews

A 20-60-minute semistructured interview was conducted with each teacher at the beginning and end of the study. The interviews were designed to address teachers' perceptions of their efficacy, factors that enhance or detract from their sense of efficacy, their teaching style and perceived role, and in general to obtain a more in-depth feeling for factors that might influence the more quantitative results of the study. All interviews were taped and transcribed verbatim.

Sample Selection

In June of 1984, the Teacher Sense of Efficacy Scale was mailed to all 77 grade 3 and 6 teachers in three school jurisdictions in Southern Alberta. From the 65 teachers (84%) who completed the scale, a sample of 24 teachers was selected for further participation.

The initial intent was to select the 12 teachers who scored highest and the 12 who scored lowest on both the personal efficacy and teaching efficacy dimensions of the Teacher Sense of Efficacy Scale. However, of the 12 teachers who scored the highest on the personal efficacy scale, only four were in the top 12 on the teaching efficacy scale. This result was not surprising given Ashton and Webb's (1986) comment that "teachers' scores on the two Rand items were not significantly correlated" (p. 8). Ashton's (1984) research findings suggested that teachers who are low on personal efficacy have the most negative effect on their students. Therefore, teachers were selected for the study on the basis of their personal efficacy score, unless the teachers who were high on personal efficacy were below the median on teaching efficacy. Using this process a total of 12 "high efficacy" teachers and 12 "low efficacy" teachers were asked and agreed to participate further in the study. Three teachers preferred not to participate because of an impending maternity leave, an impending retirement, and a new teaching assignment. They were replaced with the three teachers with the next highest or lowest scores as appropriate.

Procedure

Early in the fall of 1985 the researchers administered the CAT, the NJTRS, and the Children's Efficacy Scale to the students in the classrooms of the 24 study teachers. At the same time, each teacher completed the NJTRS and the personal interview. The testing procedure was repeated at the end of the school year, that is, in May or June 1986. At that time the students also completed the OCIW assessment of their teachers. Teachers were interviewed again, but in this case the interview focused on their definitions of success, their feelings of success over the past year, and factors which influenced that perception of success.

Results

In order to confirm that the Efficacy Scale did in fact measure two separate dimensions of efficacy, a principal components factor analysis with Varimax rotation was performed on the efficacy scores of the 65 teachers in the original sample from which the sample for this study was selected. With only default restrictions on the program, five factors were produced, with the variables clustered in a manner not inconsistent with the two groupings identified by Gibson and Dembo (1984). When the analysis was forced to result in only two factors, the items loaded on the same two factors identified by Gibson and Dembo, clearly differentiating between the personal and the teaching efficacy dimensions.

Analysis of Teacher Data

Descriptive information about the 24 teachers in the study is shown in Table 1. Interestingly, the sample had more males than females. One can only speculate about the reasons for this because the percentages do not appear to be representative of the population of elementary teachers in Southern Alberta. In the original sample of 65 teachers (84% of all grade 3 and 6 teachers) from whom the 24 were selected, 24 (36.4%) were males

and 40 (61.5%) were females (the gender of one teacher was not stated). However, teacher gender was significantly related to personal efficacy scores for those 65 teachers. Of the 20 teachers in the original sample who were above the median on both personal and teaching efficacy, 15 were females and five were males; of the 21 teachers who were below the median on both dimensions seven were females and 14 were males. Thus males appear to have been over represented in the study sample primarily because they were concentrated at the lower end of the efficacy measures. All five males in the upper group ended up in the study sample as did eight of the 14 males in the lower group.

Generally, it appears that teachers have a stronger belief in their personal efficacy than in the general ability of teachers to effect certain outcomes. In both the fall testing and the spring testing for the 24 sample teachers, personal efficacy scores were significantly higher than teaching efficacy scores (for fall $t=6.55$; $p<.01$; for spring $t=4.21$; $p<.01$). It is also interesting to note that there was greater variability among the teachers' beliefs about the efficacy of teachers in general than among their beliefs about their own personal sense of efficacy.

Correlations between teachers' efficacy scores at the beginning of the year and at the end of the year ($N=23$) were .73 on the personal dimension

TABLE 1
Descriptive Information about Teachers in the Study

		N (%)	M	SD
Sex -	Females	11 (45.8)	---	---
	Males	13 (54.2)	---	---
Grades -	2	1 (4.2)	---	---
	3	8 (33.3)	---	---
	4	1 (4.2)	---	---
	5	-- (0.0)	---	---
	6	10 (41.7)	---	---
	Split 3/4	1 (4.2)	---	---
	Split 5/6	3 (12.4)	---	---
Efficacy Scores ¹				
Fall -	Personal	24	4.76	0.72
	Teaching	24	3.74	1.07
	Overall	24	4.32	0.81
Spring -	Personal	23	4.93	0.69
	Teaching	23	4.00	1.20
	Overall	23	4.52	0.79
New Jersey Test of Reasoning Skills ²				
Fall		24	43.50	3.76

¹Mean scores, based on a 6-point scale, where 6 denotes a high efficacy response and 1 denotes a low efficacy response.

²Total number of items correct out of 50.

and .86 on the teaching dimension. Both of these are significant at the .01 level. However, although the differences were not statistically significant, teachers' efficacy scores, both personal and teaching, were higher at the end of the year than at the beginning of the year.

The efficacy scores for grade three teachers were consistently higher than for grade 6 teachers. However, these differences were not statistically significant except in the case of the teaching efficacy scores at the end of the year where the mean score of grade 3 teachers ($N=9$) was 4.56 and for grade 6 teachers ($N=13$) it was 3.20 ($t=2.74$; $p<.05$). Correlations between teachers' efficacy scores and their scores on the NJTRS were not significant for either dimension of efficacy or at either time of the year. In order to maximize differences between the high and low efficacy teachers, they were divided into three equal-size groups on the basis of beginning-year efficacy scores on each of personal and teaching efficacy. The high group for personal efficacy included teachers whose efficacy scores were 5.33 or above, while the bottom group's scores were 4.44 or below. For teaching efficacy, the high group included those teachers whose efficacy scores were 4.29 or above, while the bottom group's scores were 3.00 or below. Teachers in the high efficacy groups had higher mean scores on the NJTRS than did teachers in the low efficacy group. The difference was not statistically significant for the personal dimension of efficacy, but it was on the teaching dimension ($t=2.14$; $p=.05$).

Analysis of Student Data

Descriptive information about the total sample of students is shown in Table 2. Of the 584 students in the 24 classrooms in the study, 49.8% were female and 50.2% were male. Because of changes that occurred in teaching assignments, there was one grade 2 class and one grade 4 class in the sample; these classrooms were not included in the analysis of the student data. Also, the grades 4 and 5 students in the two split grade classrooms were eliminated from this analysis, leaving a total of 205 grade 3 students and 290 grade 6 students in 22 classrooms.

As one of the school districts administered the Canadian Achievement Tests routinely at the end of each year, it did not seem prudent for us to retest these children at the beginning of the year. Pretest scores were therefore based on different levels of achievement tests in the three districts; that is, in one district students wrote the grade 2 test at the end of grade 2, and in the others the students wrote the next level of test just two months later at the beginning of grade 3. Therefore, gain scores were not comparable across districts, and posttest scores were used as the measure of student achievement. However, because school district appeared from the preliminary analysis to be a factor in student achievement, it was used as a variable in the multiple regression analyses.

It was hoped that the measure of students' sense of efficacy would clearly differentiate between the students' personal sense of efficacy and their beliefs about students in general, in a manner similar to the teacher scale. However, it was not possible on the basis of a factor analysis of the results

TABLE 2
Descriptive Information about Students by Grade Level

Measure	Total Sample (584)		Grade 3 (205)		Grade 6 (290)	
	M	SD	M	SD	M	SD
Efficacy Scores ¹						
Fall	3.27	0.44	3.14	0.44	3.37	0.39
Spring	3.39	0.40	3.41	0.38	3.40	0.38
New Jersey Test of Reasoning Skills ²						
Fall	27.10	8.05	21.51	5.51	30.79	7.72
Spring	30.63	8.31	25.56	6.77	34.26	7.57
Canadian Achievement Test Scores - Fall ³						
Reading Average	485.50	73.69	426.01	35.19	532.30	61.26
Language Average	518.94	82.52	462.84	51.26	567.20	69.48
Math Average	418.31	73.02	354.13	34.87	467.23	53.08
Total	448.18	84.99	377.83	38.89	502.08	68.38
Canadian Achievement Test Scores - Spring ³						
Reading Average	512.50	71.93	464.33	45.78	550.40	67.38
Language Average	542.12	74.67	499.32	55.29	575.58	71.89
Math Average	458.60	67.07	412.25	37.93	498.69	56.48
Total	485.68	80.00	432.86	50.01	526.86	74.26
Our Class and its Work - Spring ⁴						
Total	2.70	0.22	2.78	0.20	2.66	0.20

¹Mean scores, based on a 4-point scale, where 4 denotes a high efficacy response and 1 denotes a low efficacy response.

²Total number of items correct out of 50.

³Standard scale scores.

⁴Mean scores, based on a 4-point scale, where 4 denotes the most positive response and 1 denotes the most negative response.

to determine whether students differentiated between the two dimensions. Therefore, total efficacy scores were used for students.

Correlations between students' scores on the various measures for each of grades 3 and 6 are shown in Table 3. Total scores and subscale scores on the CAT were highly correlated with those on the NJTRS, which is consistent with results of the American research. Student achievement scores were also significantly correlated with the students' sense of efficacy, suggesting perhaps that students who believe in their ability to achieve do in fact do so. Correlations between students' sense of efficacy and NJTRS scores were also statistically significant, and for grade 3 students, correlations between achievement measures and OCIW scores were significant, although smaller than other correlations.

Teacher-Student Relationships

In order to determine relationships between teachers' sense of efficacy and teachers' thinking skills, and each of the student measures, the teacher was assigned the class mean scores for each of the student achievement, student thinking, student sense of efficacy, and student perceptions measures. With the class (or teacher) as the unit of analysis, *Ns* become small, reducing the likelihood of statistical significance. Results of the correlations are presented in Table 4. At the grade 3 level teachers' feelings of personal efficacy at the beginning of the year were significantly correlated with student achievement and student sense of efficacy. For grade 6 teachers the only significant relationships were between teachers' and students' sense of efficacy. Teachers' scores on the NJTRS were not significantly related to any of the student outcomes at either grade level.

TABLE 3
Correlations Among Student Scores

Student Measure	Grade 3 (N = 169-192)						
	CAT	Rdg.	Lang.	Math.	NJTRS	Eff.	OCIW
Total CAT Score	1.00	.94**	.88**	.94**	.64**	.32**	.19**
Reading Subscore		1.00	.79**	.81**	.61**	.28**	.19**
Language Subscore			1.00	.76**	.54**	.30**	.19**
Mathematics Subscore				1.00	.63**	.30**	.15*
NJTRS					1.00	.17*	.07
Efficacy						1.00	.11
OCIW							1.00

Student Measure	Grade 6 (N = 239-264)						
	CAT	Rdg.	Lang.	Math.	NJTRS	Eff.	OCIW
Total CAT Score	1.00	.88**	.91**	.91**	.72**	.21**	.01
Reading Subscore		1.00	.75**	.69**	.71**	.14*	.02
Language Subscore			1.00	.77**	.66*	.22**	.03
Mathematics Subscore				1.00	.60**	.25**	-.01
NJTRS					1.00	.13*	.03
Efficacy						1.00	.27**
OCIW							1.00

* $p < .05$

** $p < .01$

Two sets of stepwise multiple regression analyses were performed in order to determine which of the study variables were best able to account for differences in student achievement scores. The first regression used the class as the unit of analysis and the class mean CAT scores as the dependent variable. Independent variables were the teacher measures: sex, beginning of year personal and teaching efficacy scores, NJTRS scores, and the mean class OCIW scores. For grade 3, two of the five independent variables entered the regression (see Table 5). Teachers' personal efficacy entered on step one, accounting for 54% of the variance; the class OCIW scores (a measure of student assessment of the teacher) entered next, increasing the variance accounted for by 30%. None of the variables entered the regression analysis for grade 6. When each of the Reading, Language, and Mathematics subscale averages was used as the dependent variable, with the same independent variables, similar results were obtained. For grade 3, teachers' personal efficacy score was the only measure to enter the regressions on Reading and Math averages; it was the first to enter the regression on Language averages, followed by the OCIW scores and the NJTRS. No variables entered any of the regressions for grade 6.

The second regression used students' individual CAT scores as the dependent variable and students' NJTRS and efficacy scores as independent variables. For reasons indicated earlier, school district was also included as an independent variable. The results of the regression analyses are presented in Table 6. For grade 3, three variables entered the equation, together accounting for 49% of the variance in student achievement scores. The NJTRS alone accounted for 41% of the variance. For grade 6 students, school district was not a factor in student achievement. The NJTRS alone accounted for 50% of the variance in student achievement; students' sense of efficacy added another 2%.

Interview Analysis

Interviews with teachers were conducted in part to help explain the study findings and in part to discover factors that might influence the teachers' feeling of efficacy. The teachers' beliefs about the efficacy of teachers in general seemed to be higher according to the interview results than from the results of the efficacy scales. In response to the question, "Do you believe that teachers have a major impact on student learning," 16 of the 24 teachers indicated, "absolutely yes" with no qualifiers, or gave some version of that statement. Only four of the teachers indicated that they believed teachers have a minimal influence on student learning or that other influences are greater. The teaching efficacy beliefs of three of these teachers were also among the lowest on the efficacy scale.

There was much greater variability in teachers' verbalized beliefs about their personal efficacy. Perhaps modesty or self-consciousness was a factor in responses to this question because only seven teachers said yes without any qualifiers. Eight teachers listed many qualifiers or denied the impact of their own abilities, expressing their views this way:

TABLE 4
Correlations Between Teacher Scores and Class Average Scores

Grade 3 Class Mean Scores (N = 9)							
Teacher Scores	CAT	Rdg.	Lang.	Math.	NJTRS	Eff.	OCIW
Personal Efficacy-Beg.	.78**	.76**	.72*	.76**	.36	.59*	.00
Personal Efficacy-End	.16	.27	.06	.32	.08	.40	-.61*
Teaching Efficacy-Beg.	.54	.56	.48	.54	.32	.28	.07
Teaching Efficacy-End	.08	.14	.00	.16	.28	.00	.06
NJTRS	.22	.25	.04	.43	.34	.26	-.26

Grade 6 Class Mean Scores (N = 13)							
Teacher Scores	CAT	Rdg.	Lang.	Math.	NJTRS	Eff.	OCIW
Personal Efficacy-Beg.	.20	.14	.28	.18	-.05	.51*	.29
Personal Efficacy-End	.09	.00	.10	.08	-.06	.54*	.13
Teaching Efficacy-Beg.	.20	-.03	.31	.29	.03	.54*	.10
Teaching Efficacy-End	.20	-.02	.31	.24	.05	.53*	-.01
NJTRS	-.36	-.47	-.25	-.32	-.37	-.10	-.04

* p < .05
** p < .01

TABLE 5
Results of Stepwise Regression Analysis on Grade 3 Students' CAT Scores
Using Teacher (Class) Measures as Independent Variables

VARIABLES ENTERING	F	df	p
Personal Efficacy Beginning of Year	9.39	1,6	.022
Class OCIW Score	18.87	2,5	.005
R ² = .84			

I think so with some students. There are always ones that I feel I haven't had the impact on that I wanted to have. You wonder if you did everything you could have done for them.

Sometimes it's hard to tell whether you taught them or whether they already knew and you've just reviewed the material.

I think ... I think ... maybe I can.

I think that some individuals who have had certain experiences ... I have to say I have difficulty reaching them.

TABLE 6
Results of Stepwise Regression Analysis on Students' CAT Scores Using
Student Measures as Independent Variables

Grade 3 (N = 176)			
VARIABLES ENTERING	F	df	p
Student NJTRS	122.94	1,174	.000
School District	76.70	2,173	.000
Students' Efficacy Scores	58.12	3,172	.000
$R^2 = .49$			

Grade 6 (N = 248)			
VARIABLES ENTERING	F	df	p
Students' NJTRS	250.50	1,246	.000
Students' Efficacy	134.46	2,245	.000
$R^2 = .52$			

Most (five out of seven) of the teachers who expressed a strong sense of personal efficacy during the first interview also did so at the end of the year. However, there were situations which had caused some teachers to change somewhat. For example, one person who had changed from being highly tentative about his sense of efficacy at the beginning of the year to being absolutely positive at the end described “one of those happy years”:

I've had an extremely positive class. The kids are, I would say, quite responsible as far as the academics go. And since I don't have to harp on that I can spend time dealing with the social skills and having a good time.

On the other hand, a teacher whose sense of efficacy had decreased dramatically said, “I never meet my own expectations,” and described a situation in which he was new to the grade level and from which he had a prolonged absence as being detrimental because of the difficult adjustment for students and the importance of the early interactions.

We asked the teachers to tell us about the factors or situations that enhanced or detracted from their sense of being successful in influencing student learning. These responses fell readily into four categories which were labeled student factors, teacher factors, school factors, and home or community factors. Six teachers identified primarily student factors that enhanced their efficacy, and three teachers identified student factors that detracted from their sense of efficacy. Examples of factors considered to be student factors were comments such as the following:

Whatever personality traits the child is bringing into the classroom—if he's, well, let's say lazy—there are kids that just need a lot of prodding and you prod and whatever positive motivation you try and try and try you are never going to change the child from what he is.

One is the child's own limitations. If he has a learning disability or a learning problem or a physical impediment of some kind that's certainly going to put some limitations on how far we can go with the child.

I feel successful when they're finishing assignments and when they are done conscientiously as I might expect someone to be able to do within their capabilities. If I think a child is working to their potential, then I am pleased.

I think because it's something in the students' backgrounds that's right and also because of some attitudes that are put into them.

Teacher factors were identified by 11 of the 24 teachers. Seven of those named teacher factors which enhanced their sense of efficacy, and four identified teacher or personal factors which detracted from their sense of efficacy. Examples of these were as follows:

My own effectiveness is at its best when I mingle with my students at their level.

I think that first of all the teacher really has to like children, you can't overdo that. I believe strongly that there has to be an emotional bonding of sorts between the teacher and the child so that a trusting relationship is set up. Then I think, you know, they're ready to learn.

I feel that when I am enthusiastic, usually the kids will pick it up and I'll set the mood of the class so that what I am doing is fun learning as opposed to have-to learning. If I am not in a good mood, if I am at a low point, the kids probably pick it up and all of a sudden teaching becomes work again and their learning becomes work.

When I feel I've got the freedom to be a human being, then I think that impact is positive.

Four of the teachers identified school factors which enhance their efficacy, and eight identified school factors that detract from their efficacy. Examples of these factors were:

I think it comes from the leadership in the school. If you don't have the principal's respect and staff members who are strong, who are working toward betterment, [then you don't have success].

Announcements on the intercom, noise from outside like a machine working in the school playground, all of this seems to take away from my effectiveness as a teacher.

Simple interruptions into classroom time. I suppose factors such as supplies, school environment, attitudes of administrators help me to feel as if I am doing a job that is worthwhile.

Things that would perhaps be out of my control, like school policies and things that I really haven't got a lot of input into.

Home and community factors were seen to be major enhancers by only two teachers and were seen to be detractors by eight teachers. Examples of these comments were

Well, you know, the television, society, the problems are there—the broken homes, the divorces. Parent support I would say is a major factor. Sometimes there just isn't a home environment that supports that so it is a stumbling block.

A large number of students in the classroom, that made it very difficult. The room was too small for that many students. I think if I had a bigger room and fewer students.... And children from broken homes have problems that I can't appreciate and I think I don't understand my native students well enough. More and more I have trouble with the children that have a bit of a social problem.

The general attitude in society toward learning, where children become disenchanted at grade 4 and then down to grade 3 and 2 and so on and I think this is a reflection of society at large. First of all you can only do so much with the clientele that you have. Their upbringing counts for a heck of a lot in how you achieve in the classroom.

Teachers did not necessarily identify the same enhancing or detracting factors at the end of the year as at the beginning. In both cases, these factors seemed to be very context-dependent. The one exception to this was that most teachers who identified factors within themselves as being the major enhancers of student learning stated this opinion in both interviews.

The Teachers' Personal Style

Teachers were asked to describe their personal philosophic orientation to teaching, to describe the purposes of schooling as they saw them, and to comment on how they approached their roles as teachers. From their responses the teachers were classified in terms of whether a coherent philosophical orientation emerged and whether such an orientation tended toward a particular philosophical position.

Of the four teachers who apparently had no philosophical orientation three were from the low efficacy group. For the remaining 19 teachers who did appear to have some philosophic position, there did not appear to be any correspondence between the degree of cohesion and the particular philosophic tendency expressed. However, of the 13 teachers who put forward a coherent view, eight were from the high efficacy group and five were from the low efficacy group, whereas of the six who did not put forward a recognizably coherent view, three were from the high efficacy group and three were from the low efficacy group. There would appear to be some indication that a coherent philosophic orientation correlates with high efficacy.

There was also some evidence that a pragmatic philosophical orientation related to a high sense of efficacy. Of the six who presented a tendency toward philosophic pragmatism, five were from the high efficacy group, whereas of the six who presented a tendency toward classical idealism only two were from the high efficacy group. It would appear that a "practical" orientation was associated with a sense of being able to accomplish something—to make a difference. Whether this implies that a high sense of efficacy has some relationship to a practical bent and an inclination toward doing what works rather than spending time on the higher cognitive processes is not possible to say on the basis of this initial investigation. However, it may well be a dimension of efficacy worthy of further exploration.

Discussion

Although the number of teachers in the study (24) was small, and assignment changes reduced the numbers even further for analysis involving stu-

dent data, there were some interesting results which in part support the research in the United States, and at the very least suggest the need for further study. Relationships between teachers' sense of efficacy and their scores on reasoning tests were suggestive but not significant. Teachers in the high efficacy group did have higher mean reasoning test scores, but these results were significant only for the teaching efficacy scores, and correlations were not significant. Relationships between students' scores on achievement measures and tests of reasoning skills were replicated. There is also some reason to believe that students' beliefs in their own abilities are related to actual achievement. However, it is not clear whether the students' high efficacy beliefs result *from* high achievement or result *in* high achievement, or whether each reinforces the other.

For grade 3 students, teachers' personal sense of efficacy at the beginning of the year appears to be a significant factor in student achievement. Correlations between personal efficacy and student achievement measures were highly significant, and personal efficacy was the first, and in some cases the only, variable to enter multiple regression analyses. It is difficult to explain why these results would be significant only for grade 3 classes and not for grade 6, although the teachers with whom we discussed these results indicated that they were not surprised by this finding. They suggested that by grade 6 the teachers' "influence," or perceptions of ability to influence students, was declining. This suggestion, of course, requires further investigation. Teachers' sense of efficacy did appear to be related to students' sense of efficacy for both grades. Teachers' scores on the NJTRS were not related to any of the student measures; however, it may be that this instrument does not discriminate sufficiently when used with adults.

A number of factors appear to affect teacher's feelings of efficacy. There is some indication that gender may be one of these, based on the fact that the number of males in the study sample was high relative to the number of males in the initial population because of the large proportion of males in the initial group who had low efficacy scores. Time of year also appears to be a factor. Beginning of year efficacy scores seemed to be more closely related to student measures, but teachers' feelings of efficacy during the year depended a great deal on context. In situations where teachers' sense of efficacy had increased or decreased dramatically, unique contextual situations were easily identified.

It appeared from the written measures that teachers believe more strongly in their personal ability to affect student learning than in the ability of teachers in general to do so. However, in interviews personal efficacy beliefs were tempered, perhaps by modesty. Personal factors—those characteristics within students or within the teachers themselves—were more often cited as enhancing sense of efficacy than as detracting from it. School factors such as noise, interruptions, decision making processes, and leadership were cited twice as often as detractors than they were as enhancers of success. Home and community factors—factors over which teachers believe they have little control—were cited four times as often as negative factors than as positive ones. The within-teacher and within-student factors

seemed to be somewhat less context dependent in that they were cited at both the beginning and at the end of the year.

There is some reason to suspect that higher efficacy teachers tend to have a more coherent and a more pragmatic philosophical orientation toward teaching. Perhaps these teachers have a repertoire of "proven" techniques and skills and they stick with what works; perhaps because of the bureaucratic structure of teaching they have learned effective strategies for coping with what they believe they cannot change.

Concluding Comment

This study has raised more questions than it has answered. There is considerable data which requires further analysis. For example, subscale scores on the OCIW, the CAT, and the NJTRS may reveal patterns of relationships; further analysis of the large amount of rich interview data may reveal patterns of beliefs and behaviors of high and low efficacy teachers. This analysis is currently underway. Identifying direct links between teacher and student scores is unlikely because of the complexity of human and contextual intervening variables, but there is clearly reason for further study of these relationships. The next phase of this research will be an indepth study of the teaching practices and belief systems of a small group of high efficacy teachers.

Note

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References

- Ashton, P. (1984). A motivational paradigm for effective teacher education. *Journal of Teacher Education*, 35(9), 28-32.
- Ashton, P.T., & Webb, R.B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. New York: Longman.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Cinquino, D. (1978). An evaluation of a philosophy program with 5th and 6th grade academically talented students. *Thinking*, 2(3), 79-83.
- Denham, C.G., & Michael, J.J. (1981). Teacher sense of efficacy: A definition of the construct and a model for further research. *Educational Research Quarterly*, 6(1), 39-63.
- Evans, E.D., & Tribble, M.S. (1986, April). *Perceived teaching problems, self-efficacy, and commitment to teaching among pre-service teachers*. Paper presented at the meeting of the American Educational Research Association (AERA), San Francisco.
- Gibson, S., & Dembo, M. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, 76(4), 565-582.
- Glickman, D.D., & Tamashiro, R.T. (1982). A comparison of first-year, fifth-year, and former teachers on efficacy, ego development, and problem solving. *Psychology in the Schools*, 19, 558-562.
- Haas, H. (1975). *Summary of experimental research, 1975 Newark experiment*. Unpublished paper. New Brunswick, NJ: Rutgers University Institute of Cognitive Studies.
- Lipman, M. (1983). Philosophy for children. *Thinking*, 3(3 & 4), 35-44.
- Morgenstern, C.F., & Renner, J.W. (1984). Measuring thinking with standardized science tests. *Journal of Research in Science Teaching*, 21(6), 639-648.
- New Jersey Test of Reasoning Skills. (1983). Monclair, NJ: Test Division, International Association of Philosophy for Children.

- Shipman, V. (1978). *Summary of experimental research, 1976-78 Newark and Pompton Lakes, New Jersey*. Unpublished paper. Princeton, NJ: Educational Testing Services.
- Simon, C., (1981). Philosophy for students with learning disabilities. *Thinking*, 1(1), 21-29.
- Waxman, H.C., & Eash, M.J. (1983). Utilizing students' perceptions and context variables to analyze effective teaching: A process-product investigation. *Journal of Educational Research*, 76(6), 321-325.
- Wise, A.E., Darling-Hammond, L., McLaughlin, M.W., & Bernstein, H.T. (1985). Teacher evaluation: A study of effective practices. *Elementary School Journal*, 86(1), 61-121.

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Cognitive and Environmental Correlates of Adolescents' Achievement Ambitions: Family-Group Differences

The study examined the proposition that for adolescents from different family types, there are variations in relations among measures of cognitive performance, perceptions of later family environments, and achievement ambitions. Data were collected from 516 Australians who were 11 years old during an initial survey and 16 years old in a follow-up study. The adolescents were classified into four family types, defined conjointly by family social status and by parents' getting-ahead or getting-by orientation. Cognitive performance and perceptions of later parental influences had differential linear and curvilinear associations with achievement ambitions for adolescents from the various family types.

In a previous study in this journal, Marjoribanks (1983) examined relations between social status, family environments, and the cognitive performance of 11-year-old Australian children. The findings suggested that "the type of learning environment created in families is related both to parents' occupational status and to the meanings that persons attach to their work activity" (p. 121). It was proposed that further research is required which examines with greater empirical and theoretical understanding relations between family contexts and measures of school-related outcomes. Worth (1986) has observed, however, that "Suggestions for further research, when offered, are seldom followed up either by the authors or the readers" (p. 175). In this present study data were used from the earlier investigation to examine cognitive and family correlates of adolescents' achievement ambitions.

Achievement ambitions were chosen for analysis because much status-attainment research has shown that they mediate, substantially, the impact of family social status and children's cognitive performance on adolescents' eventual status attainment (Carpenter & Hayden, 1985; Kerckhoff, 1984; Knottnerus, 1987; Shavit & Williams, 1985). Saha (1985) proposes, however, that it is necessary to divide achievement ambitions into aspirations and expectations (also see Looker & Pineo, 1983; Mason, Hausser, Kerckhoff, Poss, & Manton, 1976; Spenner & Featherman, 1978). He suggests that aspirations "reflect an acceptance of the positive values society places on high levels of educational and occupational attainment; [expectations] indicate a recognition of the contextual or structural limitations of

Professor Marjoribanks is Vice-Chancellor of the University and is currently conducting a longitudinal analysis of the impact of family and school learning environments on young adults' social status.

this attainment" (p. 229). In this study the cognitive and family correlates of the educational and occupational aspirations and expectations of a sample of Australian adolescents were examined. While there are fewer studies of the effects of achievement ambitions on status attainment in Australia than in North America, Saha (1985) notes that "there is evidence suggesting that aspirations and expectations are important factors in the attainment process" of Australian youth (p. 229).

Conceptual Framework

In a review of research related to achievement ambitions, Spenner and Featherman (1978) concluded that researchers have not

identified the main interactional and contextual wellsprings of ambition either within the family or the school. The most fruitful line of inquiry has addressed the social influence of significant others, but even here the interpretations of how these others mold and foster "ambition" are not firmly established. (p. 409)

Similarly, Saha (1985) observes that "despite empirical evidence of the determinants of these social-psychological variables, well-developed theoretical interpretations of the relationships have been lacking" (p. 228).

The present investigation is generated from symbolic interaction theory. In particular, it is proposed that adolescents' achievement ambitions are related to the perceptions they develop regarding their parents' support for achievement. It is also proposed, however, that the relationships between such perceptions and ambitions vary for adolescents who have experienced differential academic achievement in their earlier schooling. That is, adolescents who perceive similar parental support for achievement may express quite different aspirations and expectations, depending on their academic performance in school.

Moreover, it is proposed that associations between perceptions of parents' support and academic ambitions will vary for adolescents from families of different social status. As Howell and Frese (1981) suggest, in traditional stratification terminology, two students with the same educational plans have different motivation labels attributed to them depending on their social backgrounds. "The one from lower origins would be said to have 'further to go' and thus 'must' be more motivated" (p. 221). It is also suggested by Davies and Kandel (1981) that reliance on perception measures introduces potential distortions into explanations of the formation of adolescents' ambitions. They propose that "parental influence, in the form of parents' educational aspirations for their children, exerts itself directly in affecting the level of the child's own aspirations without the child's apprehension of parents' values" (p. 382).

In the construction of the conceptual framework it seemed appropriate, therefore, to assess family environments by using social-status indicators, parents' assessments of those contexts, and adolescents' perceptions of parents' influences. The eventual family framework for the present investigation was based on Kahl's (1953) seminal study of "common-man" boys in which he examined relations between family social status, boys' ability, and their educational aspirations. Kahl observed that in the lower-middle

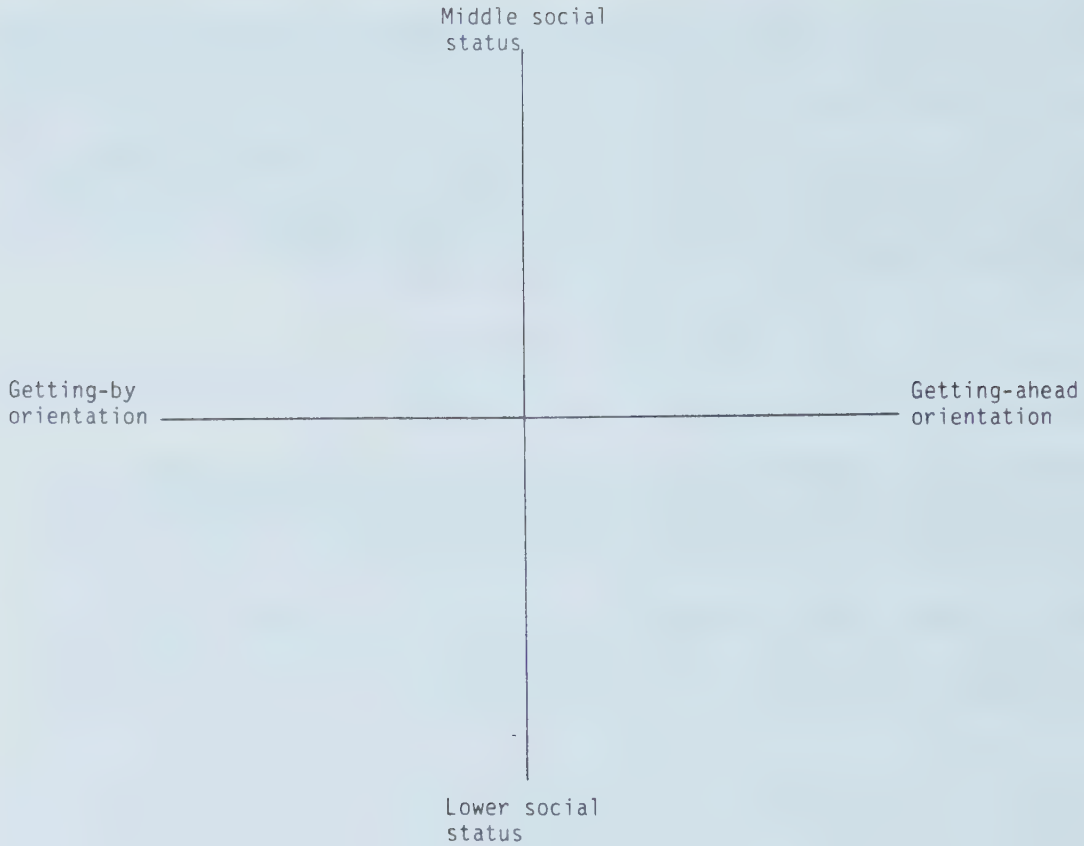


Figure 1: Family learning environment framework

class it was possible to identify “getting-by” and “getting-ahead” families. In getting-by families, boys were encouraged to enjoy themselves while they were young. The boys “were told to stay in high school because a diploma was pretty important in getting jobs nowadays, but they were allowed to pick their own curriculum according to taste” (p. 193). The possibility of pursuing a college education was rarely considered. In contrast, parents who believed in getting ahead started to apply pressure from the beginning of their sons’ school careers. “They encouraged high marks, they paid attention to what was happening at school, they stressed that good performance was necessary for occupational success, and they suggested various occupations that would be good for their sons” (p. 201).

For this study the family contexts of 11-year-olds were defined by the dimensions suggested in Kahl’s creative analysis. Families were classified by social-status characteristics and by the family dimensions of getting-by or getting-ahead, as shown in Figure 1. These early family types were considered to act as contexts in which children begin to give meaning to and interpretations of their parents’ support for achievement. From such interpretations, adolescents develop and stabilize their perceptions of family influences. In each of the family types, relations were examined between the cognitive performance of the adolescents when they were 11 years old, their perceptions of parents’ influences now that they were 16 years old, and their present educational and occupational aspirations and expectations.

Method

Sample

Data were collected initially from about 900 11-year-old children and their parents to examine associations between family contexts and children's cognitive performance (Marjoribanks, 1983). The families were selected to reflect the social status and ethnic distribution of Australian families (Marjoribanks, 1980). There were, for example, families from Anglo-Australian, English, Greek, Southern Italian, and Yugoslavian groups. In a follow-up study five years later, resources permitted an investigation involving approximately half of the earlier sample. For this present investigation two parallel pools of families from the original survey were formed. The purpose of the substitute pool was to provide a set of families that could be used if families from the first pool were unable to participate. For the pooling the total number of families was classified into lower and middle social-status groups. Families were then assigned randomly into one of the two pools. In this analysis the sample included 516 families. Each family had a 16-year-old child and the analyses relate to those adolescents. Findings from the investigation need to be interpreted within the limitation that the sample was not random. In the analyses, however, adjustments were made for the design effects of the statistics (Ross, 1987).

Measures

Social Status

During interviews, parents provided descriptions of their occupations and indicated the levels of education they had attained. Occupations were assessed using a 14-point scale that ranks over 300 occupations in the Australian context (Broom, Jones, McDonnel, & Williams, 1982), while 7-point scales were used to rank educational attainment. Principal components analysis revealed that the status indicators loaded strongly on a general factor. Family social status was defined, therefore, by an equally-weighted composite of parents' occupations and education.

Parent Socialization

In the initial survey, Marjoribanks (1983) used Rosen's (1961) social-psychological framework for the analysis of achievement-oriented families. A family environment schedule, in the form of a semistructured parent-interview inventory, was used to assess the interrelated components of parents' achievement training, independence training, achievement-value orientations, and aspirations.

Interviewing was conducted in homes by experienced social-survey interviewers who attended briefing sessions before and during the collection of data. For the present study, when the scores from the family inventory were factor analyzed, a general factor of 24 items was generated that had a theta reliability estimate of 0.86. It was decided, therefore, to use one parent socialization measure. High scores on the measure indicated that families stressed achievement training, encouraged independence, were individualistic, and had high aspirations for their children. Such families were defined

as having a getting-ahead orientation. In contrast, families were labeled as having a getting-by orientation if they expressed relatively low achievement training, encouraged dependence, were collectivistic, and had lower aspirations.

Cognitive Performance

During the original survey, the children's intellectual ability was measured using the Raven's Progressive Matrices. Achievement in mathematics, word knowledge, and word comprehension was assessed by standardized tests devised by the Australian Council for Educational Research. When the scores on the tests were factor analyzed, one general factor was identified that loaded strongly on each of the four tests. It was decided, therefore, to use a single achievement measure that was designated as children's cognitive performance.

Perceptions of Family Environment Schedule

In the follow-up survey, a structured questionnaire consisting of 5-point items was used to gather information about the adolescents' perceptions of their parents' achievement ambitions for them, the encouragement they had received from their parents in relation to secondary schooling, and their parents' general interest in their education. From the responses, two factor scales were constructed that had theta reliability estimates greater than 0.75. The scales were labeled as adolescents' perceptions of father support and mother support for achievement. Items were of the form: How much education do you think your father/mother expects you to receive? How much encouragement has your father/mother given you to stay on at school? and How interested do you feel that your father/mother has been in what you have been doing at high school?

Achievement Ambitions

The educational aspirations and expectations of the 16-year-olds were gauged by asking them to indicate what educational level they would eventually like to achieve and what level they really expected to attain. Seven-point scales were used to construct educational aspiration and expectation scores. The scales ranged, for example, from "I have left school and don't want to return" to "I would like to go on to university."

Also, the adolescents were asked to indicate what job they would really like to have when they were about 25 years old, and what job they really expected to have when they were 25 years old. From the responses, occupational aspiration and expectation scores were generated. Occupations were coded using an occupational-prestige ranking system that was developed at the Australian National University and is known as the ANU-2 Scale (Broom et al., 1982).

Results

For the analysis, adolescents were classified into four family types that were defined by the median split of scores on the social status and initial parent socialization measures (see Figure 1). The family types were labeled as mid-

TABLE 1
Zero-Order Correlations Between Cognitive Performance, Perceptions of Family Environment,
and Adolescents' Achievement Ambitions

Cognitive and perception measures	Middle status						Lower status					
	Getting ahead (n = 175)			Getting by (n = 82)			Getting ahead (n = 65)			Getting by (n = 194)		
	A ^a	B	C	A	B	C	A	B	C	A	B	C
Cognitive performance	.28**	.22**	.17*	.45** ^b	.43** ^b	.35** ^b	.14 ^b	.12 ^b	.03 ^b	.33**	.31**	.26**
Perceptions of:												
father support	.52**	.35**	.32** ^b	.60**	.52**	.57** ^b	.41**	.40**	.34**	.56**	.44**	.42**
mother support	.62**	.42** ^b	.39**	.69**	.52**	.52**	.55**	.54**	.53**	.70**	.58** ^b	.48**

^aA, educational aspirations; B, occupational aspirations; C, occupational expectations.

^b Group differences in corresponding correlations significant at 0.05 level of probability.

* p < .05. ** p < .01.

dle status/getting-ahead (175 families), middle/getting-by (82), lower/getting-ahead (65), and lower status/getting-by (194 families). Because of the relatively small sample size in each category for undertaking multivariate investigation, the analyses were not conducted separately for females and males, which is a restriction of the study. In the total sample, however, there were no significant gender-group differences in the relations between cognitive performance, perceptions of parents' support, and ambitions. Also, when the relationships among the variables were examined, the findings for aspirations and expectations were similar. In the following tables the results for occupational aspirations and expectations reflect that similarity. For the sake of parsimony, however, it was decided to not present the findings for educational expectations.

In Table 1 the zero-order correlations show that within family groups, cognitive performance had negligible to moderate associations with adolescents' aspirations and expectations. Perceptions of father and mother support had moderate to strong associations with the ambition scores. The results indicate that the relations between cognitive performance and ambitions were significantly higher in the middle status/getting-by group than for adolescents in lower status/getting-ahead families. It is not clear, however, why there should be no significant relationships between cognitive performance and the ambitions of adolescents in the lower status/getting-ahead families. In part, it may reflect that there was a conflict between lower social status and getting-ahead orientations that provided a contextual barrier to the development of such associations. Occupational expectations were more strongly related to perceived father support in the middle status/getting-by group than in the middle status/getting-ahead families. Also, perceived mother support had significantly stronger associations with occupational aspirations for adolescents in lower status/getting-by families than for those in the middle status/getting-ahead group. These initial results indicated the possible presence of family-group differences in relations among cognitive performance, adolescents' perceptions of parental influence, and their achievement ambitions.

Zero-order correlations provide, however, only a limited understanding of the covariate structure of variables. Relationships among cognitive performance, environment perceptions and ambitions were investigated further by plotting regression surfaces generated from hierarchical regression models. In the models, product terms were included to test for possible interaction effects, and squared terms were added to examine possible curvilinear relationships. Prior investigations have indicated the presence of interaction and curvilinear relations among measures of adolescents' individual attributes, environment measures, and their school-related outcomes. That is, the regression models were of the form: $Z = aX + bY + cX.Y + dX^2 + eY^2 + \text{constant}$, where Z, X, and Y represented measures of ambitions, cognitive performance, and environment perceptions respectively. In order to reduce multicollinearity in the regression models, each variable was transformed by subtracting means from the raw scores of the relevant measures.

TABLE 2
Raw Regression Weights for the Multiple Regression of Cognitive Performance and
Perceptions of Parents' Support on Achievement Ambitions

Cognitive and perception measures	Middle status						Lower status					
	Getting ahead			Getting by			Getting ahead			Getting by		
	A ^a	B	C	A	B	C	A	B	C	A	B	C
Performance	.009*	.509*	.360	.016	1.06*	.741	.002	.144	-.194	.009c	.781 ^c	.883
Father support	.244	10.3	10.1	.288	15.6	21.1	.231	15.6	17.4	.261	15.3	16.9
Performance x												
Father support	b	b	b	-.003*	b	b	b	b	b	b	b	.181*
(Performance) ²	b	b	b	.0003*	b	b	b	b	b	b	b	b
(Father support) ²	.028*	1.12*	1.61*	.038*	1.99*	1.77*	.035*	1.72*	2.52*	.028*	2.16*	1.24*
R ^c	.61	.41	.40	.78	.66	.64	.60	.50	.48	.68	.59	.52
Performance	.008*	.450	.301	.016	1.16*	.800	.003	.150	-.185	.009*	.747*	.655*
Mother support	.347*	14.7*	15.5*	.303	17.8*	22.2*	.226	16.8	20.6	.344	20.2	17.2
Performance x												
Mother support	b	b	b	b	b	b	b	b	b	b	b	b
(Performance) ²	b	b	b	.0003*	b	b	b	b	b	b	b	b
(Mother support) ²	b	b	b	.038*	b	b	.030*	1.66*	1.98*	.014*	1.58*	1.88*
R ^c	.63	.43	.40	.74	.57	.54	.63	.58	.57	.72	.62	.53

^aA, educational aspirations; B, occupational aspirations; C, occupational expectations.
^bVariable not included in the second stage of the hierarchical regression analysis.
^cAll multiple correlations significant beyond 0.05 level of probability.
* Value of raw regression weight exceeds at least twice its standard error.

In the analysis, if the addition of interaction or squared terms was not associated with a significant increment in the amount of variance in ambition scores, then the term was deleted from the particular regression model. When interaction and curvilinear terms make a significant contribution to the variation in dependent measures, it is necessary to interpret with caution the regression weights in the resulting full regression model. Once such higher-order terms are added to a regression model, the coefficients of linear forms of the related variables become unstable. In the following table, if interaction or curvilinear terms were significant, then only the regression weights associated with those variables have been designated as being statistically significant. The implication is that the related linear term was significant before the addition of the higher-order term, and its continued significance is reflected in the addition of the associated later term.

Generally, the findings in Table 2 indicate that in each family type, the predictor variables combined to have moderate to strong associations with achievement ambitions. There were, however, family group differences in the amounts of variance associated with the predictors. Also, the regression weights reveal the possible complexity of relations among the variables in the various groups. In each family type, for example, aspirations and expectations were related to the squared-father support term. Moreover, in lower social status families, achievement ambitions were associated with the squared-mother support measure. In particular, adolescents' educational aspirations in middle status/getting-ahead families had intricate associations with the predictor variables.

From the raw regression weights in Table 2, regression surfaces were plotted to examine further the nature of family-group variations in the relations among the variables. Because of space limitations it was not possible to present all the surfaces. Instead, 16 surfaces that depict the nature of the different associations among the variables have been chosen and presented in two figures. Scores for the figures were standardized with means of 50 and standard deviations of 10, calculated over the total sample.

The surfaces in Figure 2 show the regression-fitted relations among cognitive performance, perceptions of parents' influences, and educational aspirations in each family type. For middle status/getting-ahead and lower status/getting-by families, adolescents' cognitive performance had significant linear associations with educational aspirations at each level of parents' support. In contrast, cognitive performance and educational aspirations were not related in lower status/getting-ahead families while they had curvilinear associations in middle status/getting-by families.

For adolescents in middle status/getting-ahead families, perceived mother support had significant linear relations to educational aspirations. At each cognitive level, increases across the range of mother-support scores were associated with increments of approximately 25 regression-fitted points in aspirations. Perceived father support, however, tended to act as a threshold variable such that until a certain support level was perceived, there was no association with aspiration scores. After the threshold value, further increments in father support were related to increasing changes in

aspirations. At a performance score of 30, for example, the fitted-educational aspiration scores were 42, 42, and 51 at father-support values of 40, 50, and 60 respectively. In lower status/getting-ahead families, father and mother support also tended to act as threshold variables.

The shapes of the surfaces in the middle status/getting-by group express the possible complexity of relationships among the variables being investigated. Cognitive and environment measures had curvilinear associations with aspirations. The shape of the father-support surface reflects a significant interaction between the predictors and the aspiration scores. At father-support values of 30 and 70, for example, adolescents' educational aspirations increased by approximately 12 and 4 regression-fitted points across the cognitive scores. For lower status/getting-by families, father support acted as a threshold variable, while perceived mother support had a positively increasing curvilinear relation to educational aspirations.

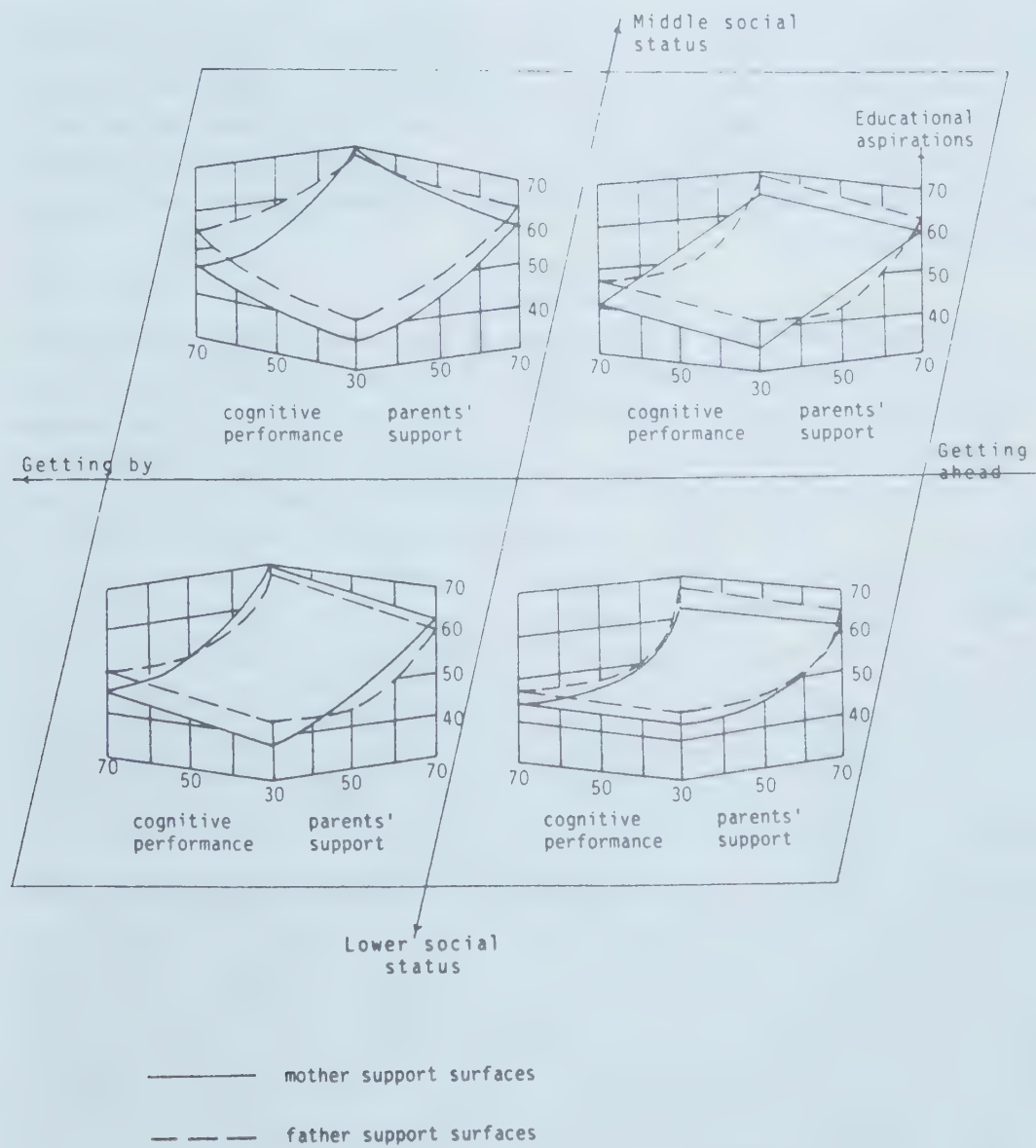


Figure 2: Fitted-educational aspiration scores in relation to cognitive performance and perceived parents' support in each family group

In Figure 3 the surfaces show the regression-fitted relations among cognitive performance, parents' support, and adolescents' occupational expectations in each family type. The patterns of relationships for occupational aspirations and expectations were rather similar. There was, however, a significant interaction effect involving expectation scores. It was decided, therefore, to plot the surfaces for expectations to portray the effect of such an interaction. Only in lower status/getting-by families was cognitive performance related to occupational expectations. For adolescents in those families, increments across the range of cognitive performance were related to approximately 6 fitted-points in expectations at each level of perceived mother support. In contrast, the father-support surface exhibits the presence of a significant interaction effect. At low father-support values, occupational expectations were not related to cognitive performance; however, they had a significant positive association at high levels of perceived father support.

Also, the surfaces indicate that in the middle-status groups perceived mother support had significant linear relations to occupational expectations, whereas in the lower-status groups mother support acted as a threshold variable. In each family group, the surfaces portray the presence of curvilinear relationships between perceived father support and occupational expectation scores.

Discussion

The findings from the study suggest that if children's family learning environments are defined conjointly by social status and socialization dimensions, then cognitive performance and perceptions of later family influences have differential associations with achievement ambitions for adolescents from the various family groups. That is, early family-environment type may be considered to act as a critical underlying variable for the formation of adolescents' perceptions of their parents' support for achievement and of their eventual achievement ambitions.

In educational investigations there is an increasing tendency to adopt interaction research models. Such orientations suggest that school-related outcomes are associated with individual attributes and with learning situations. Much of the research, however, has been restricted to an examination of how much variation in outcomes is related to attributes, situations, and the interactions between attributes and situations.

By building on Kahl's (1953) analysis the present study indicates that interaction models might profitably be examined within previously experienced learning contexts. That is, the study suggests the general proposition that adolescents' early family experiences provide differential contexts in which individual attributes interact with later environment perceptions to impact on eventual school outcomes. The study also suggests that in status-attainment research, further refinements of family environments are required which accept that social-status groups are not homogeneous in relation to the experiences provided for children (Aggleton & Whitty, 1985; Brewer & Haslum, 1986; Snipp, 1985). Be defining family

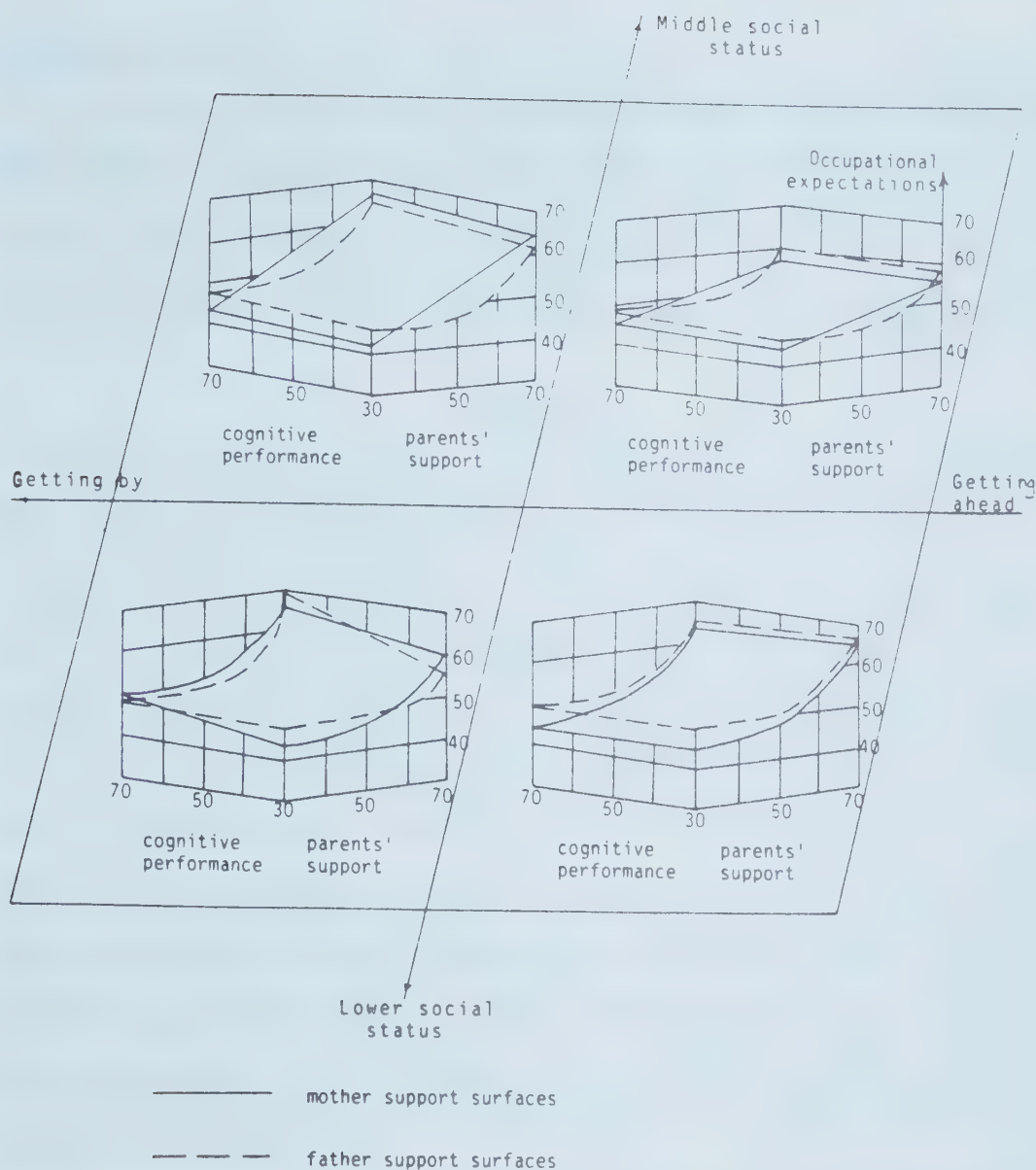


Figure 3: Fitted-occupational expectation scores in relation to cognitive performance and perceived parents' support in each family group

environments conjointly by social status and socialization dimensions, the analysis provides support for the contention of Jeffries and Ransford (1980) and Ransford and Miller (1983) that more accurate predictions and a more complete theoretical understanding of social-psychological relationships might occur if the intersections of social hierarchies are examined.

The previous study by Marjoribanks (1983) suggested the need for further analyses of relations between family learning environments and adolescents' school-related outcomes. By replicating, in part, Kahl's investigation and by using regression surface models, the present study indicates the possible complexity of relations between family situations and achievement ambitions at different levels of cognitive performance. The findings suggest that children's early family types provide a context from which adolescents form perceptions of their parents' support for achievement. Such perceptions are related differentially to the adolescents' achievement ambitions at various levels of cognitive performance. What is required now

are studies that examine associations among other measures of individual attributes, environments, and outcomes for adolescents from various family groups. In such research it would be desirable to assess with increasing sensitivity the getting-by/getting-ahead dimension of family socialization. When such research is undertaken it will be possible to conclude to what extent early family type is an organizing force that guides relations between individual attributes, environment perceptions, and adolescents' school-related outcomes.

References

- Aggleton, P.J., & Whitty, G. (1985). Rebels without a cause? Socialization and subcultural style among the children of the new middle classes. *Sociology of Education*, 58, 69-72.
- Brewer, R.I., & Haslum, M.N. (1986). Ethnicity: The experience of socio-economic disadvantage and educational attainment. *British Journal of Sociology of Education*, 7, 19-34.
- Broom, L., Jones, F.L., McDonnell, P., & Williams, T. (1982). *The inheritance of inequality*. London: Routledge & Kegan Paul.
- Carpenter, P.G., & Hayden, M. (1985). Academic achievement among Australian youth. *Australian Journal of Education*, 29, 199-220.
- Davies, M., & Kandel, D.B. (1981). Parental and peer influences on adolescents' educational plans: Some further evidence. *American Journal of Sociology*, 87, 363-387.
- Howell, F.M., & Frese, W. (1981). Educational plans as motivation or attitude? Some additional evidence. *Social Psychology Quarterly*, 44, 218-236.
- Jeffries, V., & Ransford, H.E. (1980). *Social stratification: A multiple hierarchy approach*. Boston: Allyn & Bacon.
- Kahl, J.A. (1953). Educational and occupational aspirations of "common man" boys. *Harvard Educational Review*, 23, 186-203.
- Kerckhoff, A.C. (1984). The current state of social mobility research. *Sociological Quarterly*, 25, 139-153.
- Knottnerus, J.D. (1987). Status attainment research and its image of society. *American Sociological Review*, 52, 113-121.
- Looker, E.D., & Pineo, P.C. (1983). Social psychological variables and their relevance to the status attainment of teenagers. *American Journal of Sociology*, 88, 1195-1219.
- Marjoribanks, K. (1980). *Ethnic families and children's achievements*. London: Allen & Unwin.
- Marjoribanks, K. (1983). Occupational situs, family learning environment and children's academic achievement. *Alberta Journal of Educational Research*, 29, 110-122.
- Mason, W.M., Hauser, R.M., Kerckhoff, A.C., Poss, S.S., & Manton, K. (1976). Models of response error in student reports of parental socioeconomic characteristics. In W.H. Sewell, R.M. Hauser, & D.L. Featherman (Eds.), *Schooling and achievement in American society* (pp. 443-519). New York: Academic Press.
- Ransford, E.D., & Miller, J. (1983). Race, sex and feminist outlooks. *American Sociological Review*, 48, 46-59.
- Rosen, B.C. (1961). Family structure and achievement motivation. *American Sociological Review*, 26, 574-584.
- Ross, K.N. (1987). Sample design. *International Journal of Educational Research*, 11, 57-75.
- Saha, L.J. (1985). The legitimacy of early school learning: Occupational orientations, vocational training plans, and educational attainment among urban Australian youth. *Sociology of Education*, 58, 228-240.
- Shavit, Y., & Williams, R.A. (1985). Ability grouping and contextual determinants of educational expectations in Israel. *American Sociological Review*, 50, 62-73.
- Snipp, C.M. (1985). Working-class differentiation and men's career mobility. *British Journal of Sociology*, 36, 354-382.
- Spencer, K.I., & Featherman, D.L. (1978). Achievement ambitions. In R.H. Turner, J. Coleman, & R.C. Fox (Eds.), *Annual review of sociology* (pp. 373-420). Palo Alto, CA: Annual Reviews.
- Worth, W.H. (1986). Research impotence: Blessing or blight? *Alberta Journal of Educational Research*, 32, 175.

PERSPECTIVES

Play and Cognitive Development in Preschoolers: A Critical Review

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Results regarding the role of play in cognitive development are inconclusive, and an oft cited reason is the problem of defining play. Examination of "play-and-cognitive-development" research reveals that in general, play is defined in a consistent manner, but on the other hand, inconsistent formulations of cognitive development are applied. This article suggests that the approach to definition of cognitive development must also be considered when attempts are made to draw conclusions about play's consequences for cognitive development.

During the last 15 years, the role of play in the development of the child has been the subject of great interest and controversy among educators and psychologists. A vast literature has accumulated addressing this subject, including books, empirical studies, newsletters, and conference reports. Play has been seen as developmentally irrelevant by some educators such as Montessori (1967), as the child's major way of learning from earliest infancy (Weininger, 1979), and even as the foundation on which human culture rests (Huizinga, 1970).

Nowhere have differences about the function and consequences of play in children's lives been more sharply defined than in the study of its relationship with cognitive development. A quotation from Saltz and Brodie (1982) illustrates these differences:

Does "pretend play" influence cognitive development in young children? The very question seems to arouse strong emotions in many. On the one hand, there are those for whom the notion of play seems to have an almost mystic significance for development.... To others the notion is treated like an attempt to invoke supernatural causation. (p. 97)

The central issue has been, and continues to be, whether or not play is constitutive of cognitive growth.

In attempting to determine what consequence play has for the cognitive development of preschoolers, one must ascertain first whether various re-

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searchers define *play* and *cognitive development* in a consistent fashion. This review finds that variations in the definition of play have been noted and discussed; some have even questioned the need for a definition at all (Schwartzman, 1978). In this way definitions of play are made explicit, and in our view play has been defined in a reasonably consistent manner throughout the literature. In contrast the various formulations of cognitive development that inform the play research have not been noted. Conclusive results regarding the role of play in cognitive development have proven elusive, and an oft cited reason is the problem of defining play. Differences in a definition of cognitive development, however, might also explain some of the discrepancies. The suggestion we are advancing is that the approach to definition of cognitive development must also be considered when attempts are made to draw conclusions about play's consequences for cognitive development.

Definitions of Play

With respect to play, Smith and Vollstedt (1985) proposed the following: "The problem of defining play cannot be evaded indefinitely ... if certain researchers show that play is important in development or education, then practitioners would need to know on what basis play had been or should be distinguished from other behaviours" (p. 1042). For example, Smith and his colleagues suggested that by some criteria *constructive play*, in which objects seem to be manipulated by the player with a goal in view, would appear more like work than play (Smith, Takhvar, Gore, & Vollstedt, 1985). Hence claims by researchers who relate constructive play to cognitive development might be irrelevant to Smith and others. How significant is the problem of the definition of play?

A plea for a clear and concise definition of play has surfaced repeatedly in the literature, and indeed Vandenberg (1982) called play a concept in need of a definition. Berlyne (1969) remarked that

a characterization of playful behaviour is not easy ... certain themes continually reappear, and one writer after another tries desperately to pin them down. There is, however, obvious disagreement about what ought to be regarded as the salient defining characteristics of play. (p. 814)

The Defining Characteristics of Play

Some researchers attempt to define play by means of a consensus on its salient psychological features (Rubin, Fein, & Vandenberg, 1983). Play is described as intrinsically motivated and as attention to means rather than ends. The goals of play behavior are self-imposed rather than imposed by others. Play is not a serious rendition of the activities it resembles, and it is characterized by nonliterality. Play is free from externally imposed rules, and it requires the participant to be actively engaged. Krasnor and Pepler (1980) add that play is flexible and accompanied by positive affect. In sum, play is voluntaristic, spontaneous, pleasurable, and open-ended. While this type of definition of play is desirable, until recently (Smith & Vollstedt, 1985) no empirical research had been conducted to determine whether observers actually use these criteria to identify play.

Play as a Taxonomy

Taxonomies of play, on the other hand, which define play according to observable categories of behavior, have proven useful for research (Chance, 1979). Writers such as Piaget (1962), Smilansky (1968), who elaborated on Piaget's categories, and Parten (1932) described play categories based on social and cognitive functioning. Within Smilansky's cognitive scheme, for example, play was divided into four general types which follow a developmentally ordered pattern of change: functional play—simple repetitive muscle movements with or without objects; constructive play—the manipulation of objects to construct or to create something; dramatic play—the substitution of an imaginary situation to satisfy the child's personal wishes and needs; and games with rules—the acceptance of prearranged rules and the adjustment to these rules. Smilansky suggests that functional play appears first in infancy, and games with rules appear last at about seven years. Symbolic play occurs at about one year, reaches a peak at four or five, and tapers off at six years of age (Fein, 1981).

Research about the categorization of play has focused on the proposed developmental sequence. In one study using Smilansky's categories, Rubin and Maioni (1975) examined the relationship between play preference during free play in nursery school and two cognitive measures, decentration and classification skills. They found that sampled children engaged in significantly more functional, constructive, unoccupied, and dramatic play than in games with rules, and in significantly more functional and constructive play than dramatic play. In addition, they found significant negative correlations between functional play and the cognitive measures, and significant positive correlations between dramatic play and the cognitive measures.

In a second study, Rubin, Watson, and Jambor (1978) utilized a comprehensive observational format that nested the cognitive play categories of Smilansky (1968) within the social play categories of Parten (1932) to compare the free play behaviors of both preschool and kindergarten children with an age range of 49 to 69 months. Parten's six sequential social play categories are (a) unoccupied behavior—watching anything of passing interest, walking around the room, play with the body; (b) solitary play—alone with materials different from children within speaking distance, no conversation with others; (c) onlooker behavior—watching others, perhaps talking to others but with no entry into the play situation; (d) parallel play—playing independently with toys similar to those being used by others in close proximity, no attempt to play with others; (e) associative play—playing with other children, no role assignment or organization of activity; and (f) cooperative play—playing in an organized group. Rubin and associates found that preschoolers engaged in significantly more solitary-functional and parallel-functional play and in less parallel-constructive, parallel-dramatic, and group-dramatic (associative and cooperative) play than their kindergarten counterparts. These findings were replicated by Rubin and Krasnor (1980) with longitudinal data.

Others have questioned the proposed developmental sequence. For example, Moore, Evertson, and Brophy (1974) were among the first to consider that solitary play in children, which had been treated as evidence of nonsociability, immaturity, and dependency, was in fact indicative of independence and maturity. The authors found that the solitary play of 116 kindergarten children observed during free play was in general goal-directed, educational, and/or physically challenging. The results of another study, in which Smith (1978) observed the social participation of 48 preschool children over nine months, showed that solitary behavior did not decrease noticeably with age through the preschool period.

Despite controversy regarding the developmental sequence of play categories, this literature also demonstrates high levels of interexperiment reliability for recognizing playful behavior. Further, using the play categories described above, researchers are able to delineate their particular area of interest, and appear to understand one another's research across the accumulating play literature, thereby suggesting intraexperiment reliability as well. The literature clearly mirrors a statement made by Klinger (1969): "Nearly everyone feels he understands what is meant by 'play' and investigators are even able substantially to agree in identifying particular instances" (p. 277). Table 1 summarizes the approach to definition and the interexperiment reliability of some of the studies that have attempted to define and categorize play.

On balance, it appears that the phenomenon of play has been defined in a reasonably consistent manner using fairly standard criteria. Across studies, the same categories and psychological features have been used to study play, and within studies, these categories have been recognized with a high degree of reliability. Investigators seem to mean somewhat the same things when they use the term play.

Formulations of Cognitive Development

The second part of the question raised at the beginning of the article is whether researchers on play have consistent viewpoints when they refer to cognitive development? Paraphrasing Smith and Vollstedt's (1985) comments on play, if certain researchers show that play is important for cognitive development, then practitioners need to know how cognitive development has been defined.

Cairns' (1983) review of the history of the science of behavioral development reveals a diversity of theoretical and methodological approaches stretching back over the last 100 years. The study of cognitive development mirrors that diversity, and Case's (1984) comments on its major traditions are illuminating. According to Case, there have been three major traditions in the study of intellectual development: the empiricist tradition, the rationalist tradition, and the historico-cultural tradition.

The empiricist tradition. From the perspective of the empiricist tradition, whose roots lay in the writings of Locke (1632-1704) and Hume (1711-1776), knowledge acquisition is a process in which the perceptual system first detects stimuli in the external world, and the cognitive system then detects patterns in these stimuli. Developmental psychologists within this

TABLE 1
Interexperiment Reliability for Definitions of Play

Approach to Definition	Reference	Interexperiment Reliability
By Extension		
Paradigm	Matthews and Matthews, 1982	89%
Category	Barnes, 1971	92%
	Moore, Evertson, and Brophy, 1974	almost 100%
	Rubin and Maioni, 1975	95%
	Rubin, Maioni, and Hornung, 1976	95%
	Rubin, Watson, and Jambor, 1978	90% and 92.5%
	Rubin and Krasnor, 1980	82.5%
	Smith, 1978	87.4%
By Intension		
Salient Features	Smith and Vollstedt, 1985	80%

Note: Definition by extension: process of definition by naming examples
Definition by intension: process of definition by identification of salient features

tradition have tended to view intellectual development as the child's increasing ability to discriminate or encode various classes of stimuli and induce associations among them. Gagne's (1968) comments summarize this approach. Intellectual development is viewed as

the building of increasingly complex and interacting structures of learned capabilities. The entities which are learned build upon each other in a cumulative fashion and transfer of learning occurs among them. The structures of capability so developed can interact with each other in patterns of great complexity and thus generate an ever increasing intellectual competence ... this constitutes a genuine and measurable aspect of the learner's intellectual capability ... the stage of intellectual development depends upon what the learner knows already and how much he has yet to learn in order to achieve some particular goal. Stages of development are not related to age except in the sense that learning takes time. (pp. 189-190)

These basic notions have spawned a wide range of theories including behaviorist and neo-behaviorist theories and more recently information processing theories. While these theories differ in many respects, they are united in their views about the scientific process. They share the assumption that information provided by our senses serves as the basic building block of all our knowledge (Angeles, 1981) and that learning and development are essentially equivalent (Case, 1984).

The rationalist tradition. The second tradition in the study of intellectual development is the rationalist tradition, whose roots are found in the writings of Kant (1724-1804). Rationalism is the philosophic approach which emphasizes reason as the primary source of knowledge, prior or superior to and independent of sense perception. Reality is knowable independently of observation, experience, and the use of empirical methods. Rationalism has been contrasted with empiricism (Angeles, 1981). Kant suggested that knowledge is acquired by a process in which order is imposed on the data that the senses provide and is not merely a quality detected in these data. Within this tradition, intellectual development is viewed as age-related changes in the structures or order-imposing devices which human beings are equipped with from birth. Piaget's theory of cognitive development is the foremost example of this tradition (Case, 1984).

As a rationalist, Piaget saw intellectual development in terms of shifts in strategies resulting from a more general shift in children's logico-mathematical structures. These stage changes are reflected in the child's ability to perform certain tasks. Stage changes reflect qualitatively distinct types of logical structures, and the sequence of development is assumed to be invariant and universal. Because knowledge is constructed reflexively rather than empirically, development is necessarily slow. Because it was assumed to be universal, the role of experience, particularly physical experience, was minimized as a promoter of cognitive development (Case, 1985).

The historico-cultural tradition. According to Case (1984), the third tradition in the study of intellectual development is the historico-cultural tradition, whose roots may be traced to the writings of Goethe, Hegel, and Marx. Within this view, knowledge is always acquired in a social context as a function of the unique historical circumstances in which the group finds itself. Intellectual development cannot be separated from cultural and social experience, from the social and physical environment, from the tools which have been developed for coping with environments, and from the ways in which these tools are passed on from one generation to the next. The theories of Vygotsky and Bruner are the best known examples in this tradition (Case, 1984). Bruner, for example, stressed the importance of understanding the structure of the social context in which the transmission of knowledge takes place in order to understand the nature of the mental structures that result (Case, 1985). Bruner (1965) stated that growth of the mind is always growth assisted from the outside.

From this brief review of the major traditions in the study of intellectual development, it is obvious that there have been a wide range of approaches in examining this phenomenon. While there might be some similarities among the three traditions about what constitutes knowledge and what contributes to the growth of knowledge, there are also distinct and fundamental differences. Earlier we suggested that, in general, play researchers have explicated their definitions and categorizations of play. Consideration of the relationship of play to cognitive development, however, does not appear to have taken differences in formulations of cognitive development into account. Implicit theoretical assumptions about what is

meant by cognitive development inevitably determine the conclusions that researchers may draw about its relationship to play.

Play and Cognitive Development—The Rationalist Perspective

Piaget evolved a theory of play based on his theory of cognitive development. As such, his theory of play reflected his basic beliefs about the nature of intellectual processes and the characteristics of children's thought at particular ages. His theory of play has been widely accepted as the definitive and most comprehensive explanation in developmental psychology (Fink, 1976).

Piaget thought that play was a characteristic feature of early childhood that disappears with the onset of rational thought. Within his formulation, mastery play is equivalent to sensori-motor practice and characterizes the sensori-motor period. Symbolic play emerges in the second year at the end of the sensori-motor period, reaches a peak at age four, and declines after age six. Beginning with the onset of concrete operations, games with rules predominate (Piaget, 1976a, 1976b). As the principal mode of play in the preschool years, as well as one that has been particularly studied for its cognitive consequences (Sachs, Goldman, & Chaille, 1984), symbolic play is the focus of this section.

Piaget explained intellectual adaptations in terms of two central processes: assimilation, in which children incorporate environmental events, objects, and situations into existing ways of thinking; and accommodation, the modification of existing intellectual structures or schemas to adjust to new assimilations (Sigel, 1964). In symbolic play, during this period the child appears to mold reality to his or her own caprices without rules or limitations. Unlike objective thought which seeks to adapt itself to the requirements of external reality, symbolic play was seen as egocentric thought in its pure state. As such, Piaget described play as essentially assimilation, or as the primacy of assimilation over accommodation (1962). Play could not be regarded as causative of cognitive growth, but rather as a reflection of young children's conceptual immaturity and their tendency toward egocentricity (Piaget, 1962, 1976b). Piaget limited the function of play to practice or consolidation of newly developed cognitive abilities, thereby solidly entrenching them and preventing their loss through disuse (Fink, 1976; Rubin, Fein, & Vandenberg, 1983).

Play research undertaken within a Piagetian framework has been characterized by its attention to a specific range of cognitive variables, such as the attainment of the concept of conservation or perspective taking skills. These variables, which are landmarks in Piaget's theory of cognitive development, indicate the emergence of more complex cognitive structures. Rubin, Fein, and Vandenberg (1983) and Smith and Syddall (1978) list a number of studies in which there were no or nonsignificant results for these measures subsequent to experimental intervention that involved play. Given Piaget's belief in the slow acquisition of logical structures in a progression of invariant stages, such results are expected. It is interesting,

however, to review more thoroughly those studies in which there were positive results.

A number of researchers working within the Piagetian framework have suggested that Piaget misread the cognitive significance of symbolic play. One set of objections arose out of these researchers' observations of the conceptual maturity with which preschool children appeared to operate in this medium.

In a unique study, Golomb (1977) reacted to Piaget's assertion that in symbolic play, the child "distorts objects and uses them at will" (p. 102). In her research with children aged 2.8 to 5.8 years, Golomb found orderly rule-governed substitutions in puzzles and pretence games, a function of the nature of the task and the characteristics of the play objects. Substitutions proceeded from optimal choices to neutral ones; the general trend was to reject incongruous items. Indeed, when only incongruous objects were available for substitutions, children's responses ranged from hesitation, evasiveness, or outright rejection to amusement or laughter.

Object substitution is one area in which playing children illustrate disciplined thought; role-playing is another. Concepts commonly associated with Piaget's concrete operational stage, such as conservation (i.e., the realization that certain properties remain invariant despite perceptual transformations) and perspective-taking seem fundamental to the sociodramatic play activities of preschoolers (Fink, 1976; Sutton-Smith, 1967). Golomb and Cornelius (1977) suggest that the child's ability to substitute objects and establish roles while simultaneously maintaining the original function of the objects and the identity of the participants illustrates a thought process analogous to conservation. In addition, the ability in role-play to view oneself and the world from another's perspective reflects what Piaget considered was a conceptually mature ability to shift or decenter from one aspect of a situation to another in a flexible, balanced manner (Feffer & Gourevitch, 1960).

Other objections to Piaget's characterization of play stem from his assertion that play is primarily assimilation. In fact, children at play appear to encounter and react to activities that could conceivably demand accommodation. Feffer and Gourevitch (1960) describe how in role-play, children must accommodate to the implications engendered by each new perspective. Rubin and Pepler (1980), Matthews (1977), and Fink (1976) suggest that conflict and resolution, which are so much a part of socio-dramatic play, provide opportunities for accommodation.

The play training paradigm, pioneered by Smilansky (1968), is one experimental approach that has been extensively used in attempts to determine the significance of symbolic play for cognitive development. Because researchers noticed conceptually mature and innovative behaviors in symbolic play, they predicted that participation in such play reduces children's overall levels of egocentrism and improves their performance at tasks measuring cognitive abilities (Brainerd, 1982). And given data that some groups of children such as "disadvantaged" children or "culturally different" children are less likely than others to spontaneously produce

pretend behavior (Feitelson, 1977; Feitelson & Ross, 1973; Smilansky, 1968), researchers attempted to establish a causal relationship between pretend play and certain cognitive variables by training nonpretending children in fantasy play and then assessing changes in other areas of functioning.

A number of studies have used Smilansky's approach with interesting results. Golomb and Cornelius (1977), for example, explored the relation between symbolic play training and conservation attainment. The results of their study showed that nonconserving preschoolers who had undergone symbolic play training made a distinct improvement in conservation performance; their achievement was not matched by the control subjects. Fink (1976) also used the play training paradigm. He concluded that imaginative play had a facilitative impact on two aspects of cognitive development: social role conservation and the diminution of egocentrism as measured by kinship problems.

Despite contradictory findings with regard to the role of play in cognitive development, this body of research has in common a particular approach to what is meant by cognitive development. This approach expresses itself in the variables by which cognitive development is measured as well as in discussion of the processes by which cognitive development is thought to occur. Given Piagetian assumptions about the reflexive nature of knowledge construction, we find that the tone of the research is generally negative within this framework for the constitutive role of play in cognitive development.

Play and Cognitive Development—The Historico-Cultural Perspective

The theories of Bruner and Vygotsky have been classified within the historico-cultural tradition of cognitive development. Both have written about the adaptive function of play and have given play a major role in determining developmental outcomes (Bruner, 1974, 1976a, 1976b; Vygotsky, 1967). Vygotsky called play the "leading source of development in the pre-school years ... a means of developing abstract thought" (p. 6). Bruner (1974) stated that play was the "principal business of childhood" (p. 128).

Bruner's image of the child as the inheritor of cultural tools is helpful for understanding the importance of play for cognitive development within a historico-cultural context. In any culture, tools are passed on through the efforts and assistance of the culture (Bruner, 1965) and through the individual's biological predisposition to attend to those efforts (Case, 1985). Our culture has evolved cognitive tools, including problem solving strategies and various representational systems, which culminate in abstract thought. If play facilitates the transfer of such tools from one member of the culture to another, then it may be said to contribute directly to cognitive development.

Bruner (1974) implicated play in the acquisition of problem solving skills: "play has the effect ... of making possible the playful practice of sub-routines of behaviour later to be combined in more useful problem solving" (p. 127). Borrowing from the primate literature and from Bruner, Sylva (1977) speculated on the processes that might be involved. First, playful

manipulations of seemingly useless novel objects lead to a store of information about those objects and their potential use in the environment; this information can be called on when needed. Second, because it occurs in the absence of life pressures, play provides the player with an opportunity for combinatorial flexibility with objects and event sequences such that new rules for thought and action can be learned. Finally, play requires that the player abstract herself or himself from the immediate surroundings. Abstraction and the assemblage of constituent acts in play are important features of the problem solving process. What is acquired through play is a general set toward solving problems with increased potential for innovation.

The research that naturally grew out of the preceding assumptions focused on the role of play in the development of problem solving skills. Pepler and Ross (1981) considered play to have an effect on two categories of problem solving: convergent and divergent problem solving skills. Convergent problem solving was defined as that required by problems having one and only one correct solution. Divergent problem solving involves solving a problem or task that has no single correct solution but a variety of possible solutions. Divergent problem solving has also been referred to as divergent thinking, creativity, and associative fluency.

Convergent problem solving. In a seminal study, Sylva, Bruner, and Genova (1976) provided evidence for the role of play in promoting convergent problem solving skills. Preschool children seated in chairs were asked to reach a distant lure without standing up. To solve this problem, children had to clamp two sticks together with a "c" clamp. Prior to being presented with the problem, children were assigned to one of three conditions: a play condition, a training condition, and a control condition. The results of Sylva, Bruner, and Genova showed that play and training groups were equally proficient in subsequent problem solving and approached the problem in an orderly manner, in contrast to the control group. The play group, however, made more effective use of experimenter hints and exhibited more persistent goal-directed behavior.

Using a slightly modified version of the tasks of Sylva, Bruner, and Genova (1976), Smith and Dutton (1979) investigated the relative importance of play opportunities and training experience for problem solving in 4-year-olds. Results showed that play and training both helped children solve standard problems. With an innovative task, however, children in the play condition emerged as superior; with few or no hints, they solved the problem more quickly.

Divergent problem solving. One of the first studies to investigate the effects of play on creativity was conducted by Dansky and Silverman (1973). They thought that increased opportunity to engage in playful activity would facilitate the ability to form relationships and associations among objects, actions, and ideas which were typically unrelated, thus facilitating associative fluency. Their findings supported this hypothesis. On the Alternative Uses Test, subjects in the play group named significantly more nonstandard uses for each of four specific objects and made more use of available environmental cues than imitation or control subjects. There was no sig-

nificant difference in the number of standard uses given by the three groups. Dansky and Silverman (1975) extended these findings and showed that children in the play condition produced significantly more standard and nonstandard uses than imitation or control subjects, even when the test objects were not available during play. Like Sutton-Smith (1967), they suggested that the opportunity to play promoted a mental set for generating associations.

Finally, in 1980 Dansky found that the effects of play on associative fluency were restricted to those children who normally engaged in make-believe play during free play in their classrooms and who, during the experimental condition, made nonliteral use of objects. Further support for the relationship between pretend play and creativity or divergent thinking comes from the work of Feitelson and Ross (1973) and Pepler (1982). Pepler, for example, noted that representation during play, which she defined as a shift in attention from the concrete nature of the play pieces to their more abstract meaning, contributed to divergent thinking.

Play research undertaken within a historico-cultural framework is characterized by its attention to specific variables of cognitive development, namely problem solving skills and creative thinking. Variables of cognitive development which characterize research undertaken within a Piagetian framework such as conservation and perspective taking tasks are notably absent. Given historico-cultural assumptions about the positive role of social factors for development, the tone of the play research within this framework is generally more optimistic for the constitutive role of play in cognitive development.

Play and Cognitive Development—The Empiricist Tradition

Case (1984) ascribed behaviorist, neo-behaviorist, and information processing views of cognitive development to the empiricist tradition. According to Rubin, Fein, and Vandenberg (1983) and Weisler and McCall (1976), the study of play has proven problematic and unproductive within this framework.

A number of reasons for this state of affairs may be suggested. Berlyne's (1969) review of play showed how early behaviorist writers viewed play as a "purposeless" activity not worthy of scientific inquiry. Within the information processing view, a developmental perspective has only recently been applied. According to Siegler (1983), the mechanisms by which cognitive development occur have not been identified, and this lack has hindered theoretical progress in this area.

In this literature on play's contributions to cognitive development, was there any research which might be classed within this tradition? We speculate that the Saltz, Dixon, and Johnson study (1977) and the Saltz and Brodie review (1982), with their attention to a wide range of cognitive variables, followed the empirical view of knowledge development. Using the play training paradigm, Saltz, Dixon, and Johnson associated cognitive development with many variables, such as intelligence quotient, story interpretation, fantasy judgment, sequential memory, and also cognitive control

over impulsivity. Saltz and Brodie looked at measures of intelligence, vocabulary, ability to interpret cause-effect relationships, problem solving, divergent thinking, and conservation. Unlike studies undertaken within other traditions, no one cognitive variable was particularly highlighted. In addition, should one of the variables not show change, cognitive development was not ruled out. Data from the Saltz, Dixon, and Johnson experiment showed that the play conditions were consistently superior to the nonplay conditions on most of the cognitive tasks, including increases in intellectual performance as measured by standard intelligence tests. Saltz and Brodie conclude that pretend play has positive effect on cognitive functioning.

Other research that appeared to fall within an empirical framework, again for its attention to a wide range of cognitive variables, was a series of pilot studies conducted by Weininger (1985), which explored the long term use of pretend play in the classroom with handicapped and emotionally disturbed children. Using a play training approach, four seriously emotionally disturbed children aged 4 to 5 years were taught to pretend by a teacher-therapist for a short period daily for seven months. Control group children, similarly handicapped, received the same program as the experimental group, except for the pretend play training. Observation showed an improvement in the trained players in a variety of cognitive skills, such as storytelling and comprehension, reading, attention span, knowledge of cause and effect, and short and long term memory. In contrast, the control group showed no such gains. Weininger concluded that the crucial difference between the experimental group and the control group seemed to be in the regular and sensitive use of a pretend play program. He called gains in the experimental group "very real achievements ... [for] cognitive growth."

Conclusion

From this review, it can be seen that while the definition of play has been reasonably consistent, there was a broad range of formulations for cognitive development. Play researchers have been concerned with defining play and with the implications of their definitions of play on their research. The suggestion being advanced here is that with respect to the consequences of play for cognitive development the same consideration has not been applied to what was meant by cognitive development.

When play researchers have found contradictory or inconclusive results, they have tended to propose minor modifications to the definition of cognitive development rather than modifications to the definition of play (Fink, 1976; Golomb & Cornelius, 1977). Or researchers have raised methodological issues, such as posttests used (Rubin, Fein, & Vandenberg, 1983), target groups trained, or type of play training provided (Fein, 1981) as possible explanations for the inconsistent pattern of effects emerging from the play research. In addition, in a definition of what constituted cognitive development, what was highlighted and given priority by some researchers was not by others. The exchange between Piaget (1966) and Sutton-Smith (1966) is an example.

In this critique of Piaget's position on play, Sutton-Smith (1966) noted that Piaget, in his study of intellectual development, had been concerned with the

correspondence between the structures described by logic and the actual thought processes studied by psychology ... and not with those less directed aspects of adult thought usually referred to by such terms as reverie, creative imagination or divergent thinking. Yet in the opinion of some, the latter have a great deal to do with novel forms of adaptation ... if there is an intrinsic relationship between play and thought, it is more likely to be with these latter forms of divergent intellectual operations than with the directed forms which concern Piaget. (p. 107)

Both Piaget and Sutton-Smith had a common starting ground; they fundamentally agreed upon what was meant by play. Piaget, however, defined cognitive development in terms of the emergence of logical thought structures; Sutton-Smith defined cognitive development, at least with respect to play, in terms of novel adaptation.

Cairns (1983) pointed out that studies of development were crucial to the study of individual and group behavior. Shortcomings in the study of cognitive development inevitably handicap other lines of investigation. Flavell (1978) wrote with irony about the "Theory of Cognitive Development we are all waiting for" (p. 101); and currently there are a number of approaches to its formulation, none of which, according to Flavell, presents a complete picture yet. With respect to the controversy regarding the consequences of play for cognitive development, it appears that play researchers' explicit discussions and definitions not only about play, but also about their particular theoretical assumptions about cognitive development might bring further clarity to this issue.

References

- Angeles, P.A. (1981). *Dictionary of philosophy*. New York: Barnes & Noble.
- Berlyne, D.E. (1969). Laughter, humor and play. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology* (Vol. 3). Reading, MA: Addison-Wesley.
- Brainerd, C.J. (1982). Effects of group and individualized dramatic play training on cognitive development. In D.J. Pepler & K.H. Rubin (Eds.), *The play of children: Current theory and research* (Vol. 6). Basel: Karger.
- Bruner, J.S. (1965). Growth of mind. *American Psychologist*, 20, 1007-1017.
- Bruner, J.S. (1974). Child's play. *New Scientist*, 62, 126-128.
- Bruner, J.S. (1976a). Introduction. In J.S. Bruner, A. Jolly, & K. Sylva (Eds.), *Play: Its role in development and evolution*. New York: Basic Books.
- Bruner, J.S. (1976b). Nature and uses of immaturity. In J.S. Bruner, A. Jolly, & K. Sylva (Eds.), *Play: Its role in development and evolution*. New York: Basic Books.
- Cairns, R.B. (1983). The emergence of developmental psychology. In P.H. Mussen (Ed.), *Handbook of child psychology* (Vol. 1). Toronto: Wiley.
- Case, R. (1984). *The new stage theories in cognitive development: Why we need them, what they assert?* Paper presented at the Minnesota Symposium on Child Development.
- Case, R. (1985). *Intellectual development: Birth to adulthood*. New York: Academic Press.
- Chance, P. (1979). *Learning through play*. New York: Gardner.
- Dansky, J.L. (1980). Make-believe: A mediator of the relationship between play and associative fluency. *Child Development*, 51, 576-579.
- Dansky, J.L., & Silverman, I.W. (1973). Effects of play on associative fluency in preschool-aged children. *Developmental Psychology*, 9, 38-43.
- Dansky, J.L., & Silverman, I.W. (1975). Play: A general facilitator of associative fluency. *Developmental Psychology*, 11, 104.

- Feffer, M.H., & Gourevitch, V. (1960). Cognitive aspects of role-taking in children. *Journal of Personality*, 28, 383-396.
- Fein, G.G. (1981). Pretend play: An integrative review. *Child Development*, 52, 1095-1118.
- Feitelson, D. (1977). Cross-cultural studies of representational play. In B. Tizard & D. Harvey (Eds.), *Biology of play*. London: Heinemann.
- Feitelson, D., & Ross, G.S. (1973). The neglected factor: Play. *Human Development*, 16, 202-223.
- Fink, R.S. (1976). Role of imaginative play in cognitive development. *Psychological Reports*, 39, 895-906.
- Flavell, J.H. (1978). Comments. In R.S. Siegler (Ed.), *Children's thinking: What develops?* Hillsdale: Lawrence Erlbaum.
- Gagne, R.M. (1968). Contributions of learning to human development. *Psychological Review*, 75, 177-190.
- Golomb, C. (1977). Symbolic play: The role of substitutions in pretence and puzzle games. *British Journal of Educational Psychology*, 47, 175-186.
- Golomb, C., & Cornelius, C.G. (1977). Symbolic play and its cognitive significance. *Developmental Psychology*, 13, 246-252.
- Huizinga, J. (1970). *Homo ludens*. London: Maurice Temple Smith.
- Klinger, E. (1969). Development of imaginative behaviour. *Psychological Bulletin*, 72, 277-298.
- Krasnor, L.R., & Pepler, D.J. (1980). The study of children's play: Some suggested future directions. In K. Rubin (Ed.), *Children's play*. San Francisco: Jossey-Bass.
- Matthews, R.J., & Matthews, W.S. (1982). A paradigm case approach to the study of fantasy. In D.J. Pepler & K.H. Rubin (Eds.), *The play of children: Current theory and research*. Basel: Karger.
- Matthews, W.S. (1977). *Sex role perception, portrayal, and preference in the fantasy play of young children*. Paper presented at the meeting of the Society for Research in Child Development, New Orleans.
- Montessori, M. (1967). *The discovery of the child*. New York: Ballantine.
- Moore, N.V., Evertson, C.M., & Brophy, J.E. (1974). Solitary play: Some functional reconsiderations. *Developmental Psychology*, 10, 830-834.
- Parten, M.B. (1932). Social participation among preschool children. *Journal of Abnormal Psychology*, 27, 243-269.
- Pepler, D.J. (1982). Play and divergent thinking. In D.J. Pepler & K.H. Rubin (Eds.), *The play of children: Research and theory*. Basel: Karger.
- Pepler, D.J., & Ross, H.S. (1981). The effects of play on convergent and divergent problem-solving. *Child Development*, 52, 1202-1210.
- Piaget, J. (1962). *Play, dreams, and imitation in childhood*. (C. Gattegno & R.M. Hodgson, Trans.). London: Routledge & Kegan Paul.
- Piaget, J. (1966). Response to Brian Sutton-Smith. *Psychological Reports*, 73, 111-112.
- Piaget, J. (1976a). Mastery play. In J.S. Bruner, A. Jolly, & K. Sylva (Eds.), *Play: Its role in development and evolution..* New York: Basic Books.
- Piaget, J. (1976b). Symbolic play. In J.S. Bruner, A. Jolly, & K. Sylva (Eds.), *Play: Its role in development and evolution*. New York: Basic Books.
- Rubin, K.H., Fein, G.G., & Vandenberg, B. (1983). Play. In H. Mussen (Eds.), *Handbook of Child Psychology* (Vol. 4). New York: Wiley.
- Rubin, K.H., & Krasnor, L.R. (1980). Changes in the play behaviors of preschoolers: A short-term longitudinal investigation. *Canadian Journal of Behavioral Science*, 12, 278-282.
- Rubin, K.H., & Maioni, T. (1975). Play preference and its relationship to egocentrism, popularity and classification skills in preschoolers. *Merrill-Palmer Quarterly*, 21, 171-179.
- Rubin, K.H., Maioni, T.L., & Hornung, M. (1976). Free play behaviors in middle and lower class preschoolers: Parten Piaget revisited. *Child Development*, 47, 414-419.
- Rubin, K.H., & Pepler, D.J. (1980). The relationship of child's play to social-cognitive development. In H. Foot, T. Chapman, & J. Smith (Eds.), *Friendship and childhood relationships*. London: Wiley.
- Rubin, K.H., Watson, K., & Jambor, T. (1978). Free play behaviours in preschool and kindergarten children. *Child Development*, 49, 534-536.
- Sachs, J., Goldman, J., & Chaille, C. (1984). Planning in pretend play: Using language to coordinate narrative development. In R.O. Freedle (Ed.), *Advances in discourse processes* (Vol. 13). Norwood: Ablex.

- Saltz, E., & Brodie, J. (1982). Pretend-play training in childhood: A review and critique. In D.J. Pepler & K.H. Rubin (Eds.), *The play of children: Current theory and research*. Basel: Karger.
- Saltz, E., Dixon, D., & Johnson, J. (1977). Training disadvantaged preschoolers on various fantasy activities. *Child Development*, 48, 367-380.
- Schwartzman, H.B. (1978). *Transformations: The anthropology of children's play*. New York: Plenum.
- Siegler, R.S. (1983). Information processing approaches to development. In P.H. Mussen (Ed.), *Handbook of child psychology* (Vol. 1). Toronto: Wiley.
- Sigel, I.E. (1964). The attainment of concepts. In M.L. Hoffman & L.W. Hoffman (Eds.), *Review of child development research*. New York: Russell Sage Foundation.
- Smilansky, S. (1968). *The effects of sociodramatic play on disadvantaged preschool children*. New York: Wiley.
- Smith, P.K. (1978). A longitudinal study of social participation in preschool children: Solitary and parallel play reexamined. *Developmental Psychology*, 14, 517-523.
- Smith, P.K., & Dutton, S. (1979). Play and training in direct and innovative problem solving. *Child Development*, 50, 830-836.
- Smith, P.K., & Syddall, S. (1978). Play and non-play tutoring in preschool children: Is it play or tutoring which matters? *British Journal of Educational Psychology*, 48, 315-325.
- Smith, P.K., Takhvar, M., Gore, N., & Vollstedt, R. (1985). Play in young children: Problems of definition and categorization. *Early Child Development and Care*, 19, 25-41.
- Smith, P.K., & Vollstedt, R. (1985). On defining play: An empirical study of the relationship between play and various play criteria. *Child Development*, 56, 1042-1050.
- Sutton-Smith, B. (1966). Piaget on play: A critique. *Psychological Review*, 73, 104-110.
- Sutton-Smith, B. (1967). The role of play in cognitive development. *Young Children*, 22, 361-370.
- Sylva, K. (1977). Play and learning. In B. Tizard & D. Harvey (Eds.), *Biology of play*. London: Heinemann.
- Sylva, K., Bruner, J., & Genova, P. (1976). The role of play in the problem-solving of children 3-5 years old. In J. Bruner, A. Jolly, & K. Sylva (Eds.), *Play: Its role in development and evolution*. New York: Basic Books.
- Vandenberg, B. (1982). Play: A concept in need of a definition. In D.J. Pepler & K.H. Rubin (Eds.), *The play of children: Current theory and research*. Basel: Karger.
- Vygotsky, L. (1967). Play and its role in the mental development of the child. *Soviet Psychology*, 5, 6-18.
- Weininger, O. (1979). *Play and education*. Springfield, IL: Charles C. Thomas.
- Weininger, O. (1985). Just pretend: Explorations in the use of pretend play in teaching handicapped and emotionally disturbed children. In J. Kase-Polisini (Ed.), *Creative drama in a developmental context*. Lanham, MD: University Press of America.
- Weisler, A., & McCall, R. (1976). Exploration and play. *American Psychologist*, 31, 492-508.

BOOK REVIEW

WORLD YEARBOOK OF EDUCATION 1987—VOCATIONAL EDUCATION. By John Twining, Stanley Nisbet, and Jacquetta Megarry (Eds.). London: Kogan Page. 1987, 318 pp.

This is the sixth in a series of World Yearbooks of Education commenced in 1981. Prior yearbooks have focused on Education of Minorities, Computers and Education, Women and Education, Research, Policy and Practice, and The Management of Schools. The 1987 yearbook entitled *Vocational Education* covers both vocational education and vocational training according to the definition provided by John Twining in the introduction. Although 7 of the 21 chapters focus on Britain, there is a reasonable cross section of world regions including Western Europe (overview), West Germany, the Netherlands, USSR, India, Kenya, Southern Africa, Brazil, New Zealand, Australia, Malaysia, Korea, Japan, United States, and Canada. Unfortunately, many of the chapters from outside Britain focus on only one narrow aspect of vocational education in that country and/or spend considerable time outlining the general social and educational structures, culminating with only a general discussion of vocational education. The yearbook also suffers from a lack of apparent structure in the planning and sequencing of the chapters; hence considerable work is required of the reader in order to go beyond the collection of papers to identify commonalities of concerns and trends.

Detailed analysis of the chapters reveals a wealth of viewpoints about the various social pressures and educational issues that are currently impinging on vocational education. Taken as a whole, the yearbook provides insight into the variety of program types within vocational education, although often these insights are from the perspective of just one or two countries. The collection of writings also identifies and discusses a wide range of current trends in vocational education. Herein lies the value of this yearbook to educators interested in and responsible for the development of vocational education in the future.

Some of the major social pressures influencing the nature and direction of vocational education identified include high youth unemployment, rapid technological change, shortage of skilled manpower, concerns about productivity, information technology, and growing dissatisfaction with high school programs. Chapters from the UK, Western Europe, and Australia especially emphasize the growing problem of youth unemployment coupled with a shortage of skilled manpower. This paradox gives rise to the identification, in many of the chapters, of the need for correspondence between training and employment opportunities. Concerns with social productivity are highlighted by authors writing of the USSR, Korea, Malaysia, and Japan. The impact of rapid technological change and the growth of information technology permeate many chapters, but are stressed in Phillip Hughes' chapter from Australia and by Harry Knutton from the UK.

Ron Johnson in his overview of vocational education in Western Europe identifies perhaps the major issue facing vocational education: the need to focus on youths' transition from school to work. This, and the associated issue of the relevance of vocational programs, is of concern in chapters from countries as diverse as New Zealand, Kenya, and South Korea. Other issues of long-standing concern relate to the balance of vocational with general education and the degree of specificity that should be planned within vocational offerings. These find expression in the offerings by Frank Pignatelli (Scotland), Ian Waitt (Korea and Malaysia) and Brad Imrie (New Zealand). There seems to be general agreement that vocational programs should strive for flexibility and breadth in programming and in the skills passed on to the graduates to increase the potential for relevance and provide the basis for career changes.

Different types of vocational education programs provide the focus for authors throughout the book. The diversity of program types is particularly evident in Johnson's review of Western Europe. One suspects that the selection of a particular program associated with a particular country was the result of potential contributors known by the editors, rather than attention being given to any special contribution that could be made to the development of the yearbook. Nevertheless, some representativeness is achieved. Secondary education programs tend to be the focus of contributions by Hughes (Australia), Pignatelli (Scotland), Marsh (USSR), and Roberts (UK). Full-time, pre-employment programs at the postsecondary level are emphasized in the submissions relating to the United Kingdom, Korea, Malaysia, and the Netherlands. West Germany and New Zealand are the settings for consideration of postsecondary programs integrated with employment such as apprenticeships. Japan is an excellent selection for the consideration of industry based programs, albeit through the eyes of an Australian. Brazil and a number of South African countries along with the UK were selected by the editors to provide some insight into issues related to upgrading and retraining. Two specialized approaches to both inservice and preservice instructor preparation are described: one in India (Banthiya) and the other in the UK (McCallum).

As previously noted, the major contribution of the yearbook lies in the perspective it offers on current trends in vocational education. The opportunity is provided to understand in more detail how similar concerns and motives are influencing a variety of program types within different cultures and social settings. The following is a brief review of these trends as discussed in the various chapters.

A major trend is an attempt to maximize transfer of learning. Transfer is especially important in vocational education to facilitate adaptability with rapidly changing occupational requirements, and to provide a base for later retraining. Curriculum development projects and suggestions aimed at the maximization of transfer are presented by various authors. Attempts to focus on "core" skills and knowledge are related by Marsh in his report on the USSR as well as by Roberts and Ward who write on approaches in the UK. Both Johnson and Longden suggest the need to identify and develop

“learning skills” which would enhance effectiveness in new situations. Roberts also reports on the International Labour Organization’s project which has identified “general employable skills” and developed modules of study with these as objectives. Pignatelli (Scotland) and others suggest that transferability may be grounded in affective learnings and that we should therefore focus more on the personal development of the student in order to enhance transfer. The Japanese in-plant vocational education programs have implemented the concept of “multi-tasking” to maximize transfer.

Changes in teaching/learning strategies are another trend reported by a number of the authors. The need for more flexible programs in terms of learner access has resulted in a move toward “unitized” or “modularized” educational offerings, especially in the UK as noted by Pignatelli, Twining, and Roberts. These and other approaches are identified as ways of “individualizing” instruction. An overview of two specific projects with Brazil, which documents a shift toward significant usage of technology as an aid or medium in the provision of vocational opportunities, is provided by Romiszowski. General discussions concerning the need for changes in teaching/learning strategies are advanced by Garforth, Twining, and Knutton. Movement toward distance education as a strategy for vocational education is identified by Romiszowski, McCallum, and Knutton.

Increasing attention to the costs of vocational education is identified as an international trend. In response, the balance of the contribution expected of the individual, government, and industry is dealt with by authors from Western Europe, Canada, and Japan. Examples of changes in institutional structure and governance are provided by the Netherlands, Canada, and India where institutions have been required to increase in size, adopt marketing strategies, or alter function in order to compete for government funding.

There is a developing perception of need to evaluate and change preparatory programs for instructors. Preservice and inservice concerns of vocational instructors are discussed within the Indian context by Banthiya with a shift toward a greater emphasis on inservice opportunities. McCallum (UK) focuses on the need for training instructors in the use of technology, especially the microcomputer, both with respect to its use as an instructional tool, and as a field-based research tool enabling heuristic problem solving in a way not possible before.

Increasing attention to assessment and certification of vocational skills is identified by a number of authors. Chapters by Imrie from New Zealand and Ward, Twining, and Knutton of Britain describe improvements in assessment techniques and mounting support for arrangements to facilitate transfer of credit and reciprocity in certification. Assessment of “competence” which would overlook the time component of training, and also emphasize the demonstration of skills on the job and the application of knowledge, is also an emerging theme. The implementation of “profiles,” detailing specific areas of competence to replace the traditional trade certificate, is proposed by a number of authors.

A growing emphasis on the need for a closer match between training and occupational requirements is referred to by most of the authors, especially Twining who addresses developments in this area. A detailed example of how this might be achieved is in the United States' activities in "entrepreneurship" education outlined by Ashmore. The program of the National Centre for the Study of Vocational Education provides curricular assistance to both secondary and postsecondary programs. McCallum suggests that the use of computers should improve the detailed identification of the job requirements, thus assisting in achieving a closer match as well as improving the capability of recording and storing successful achievements by students.

Retraining is becoming a more significant component of vocational education. An overview of some of the issues in retraining is provided in chapters by Romiszowski, Garforth, and Twining with Brazil, Africa, and the UK as the settings. Retraining activities are focusing on flexibility, specific learner needs, and the use of technology in individualizing instruction and in distance delivery. Computer based information systems are being used as sources of guidance regarding the availability of courses.

Marsh, in the chapter on the USSR, provides the only evidence of extracurricular activities contributing significantly to vocational education.

In summary, this World Yearbook on Vocational Education offers a useful perspective on most of the important issues and trends in vocational education. However, the opportunities for cross-cultural comparisons are few, as many of the chapters relating to countries outside the United Kingdom are specific to one narrow area of vocational education, and in some instances provide the only related discussion. For example, it is unfortunate that the contribution from the United States is limited to entrepreneurship, and that the only offering from Canada is on the use of marketing strategies in a technical institute. It is also disconcerting to note that five of the chapters purporting to address vocational education within other countries are authored either by Britons or people with extensive British experience. A more careful structuring of the book, either around evolving trends or particular themes, would also have been helpful.

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INTRODUCTION

International Perspectives on Adult Education

Carlos A. Torres
University of Alberta

This issue of *The Alberta Journal of Educational Research* is developed around the theme of adult education from international perspectives. The growing importance of adult education as human resource training world wide calls for a comparative assessment and understanding of the role and functions of adult education in diverse settings within the global community.

The stimulus for the issue and the focus of many of the articles is a comparative research project on adult education policy implementation in Tanzania, Mexico, and Alberta that is presently being conducted in partnership by the Department of Educational Foundations, University of Alberta (Canada); the Department of Education, University of Dar-es-Salaam (Tanzania); and the Centre for Educational Research (Mexico). The financial support for this research has been generously provided by the International Development Research Centre (IDRC) in Ottawa.

The issue takes advantage of independent, although related, research on adult education conducted at the University of Alberta in several departments (i.e., Elementary Education, Educational Foundations, and the Master's Program in Adult and Higher Education). Additionally, it benefits from the contribution of several scholars such as Thomas La Belle, Robert Arno, Harvey Graff, and Pablo Latapí, all of whom have published important and influential books on the subject in the last two years.

Throughout this issue, the basic assumptions of mainstream adult education regarding the role and functions of the programs of adult basic education, literacy training, and skill upgrading are viewed critically from an international perspective. There are two striking features common to adult education programs and policies world wide. They are based on a conspicuous ideology of liberal individualism (Keddie, 1980, pp. 45-64) that is further reflected in the dominant paradigm of human resource training based on the Human Capital Theory (La Belle, 1986, pp. 77-168; 1987). Accordingly, adult education seems to be preparing individuals to enter the labor market in a better position in terms of skill training; helping them to become better citizens; making them aware of their rights and responsibilities; improving their life chances by widening their range of options in

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communication skills and health care; or simply catching up with their own education, either after dropping out of or having had no opportunity to attend the formal schooling system.

Second, for many, adult education is an area apparently detached from the realm of values and devoid of ideological confrontations (who could disagree that literacy training is good, in and of itself?). This in turn is reflected in the lack of a consistent, systematic, and comprehensive theorization on adult education matters (Giroux, 1983; Jarvis, 1985). It may be argued that adult education policies are the result of wishful thinking, good intentions, empirical judgment, or trial and error approaches, more than of critical or even conventional theory and theorizing. Indeed, there is a lack of theoretical analysis from any perspective in adult education policy and programs.

Obviously, it would be unfair to expect the articles contained in this thematic issue to fill the gap in theory building in adult education. Similarly, it should not be expected that all the articles describe and analyze in detail all the elements involved in adult education programs, policies, and practices within the different research and policy settings. Whatever their collective imperfections may be, they reflect different understandings of the role, function, and mission of adult education in a fast-paced world of change which, in turn, mirrors the ambiguous nature of the field itself.

Examples of the different understandings of what adult education is all about are to be found in the proceedings of two major UNESCO world conferences on adult education. The Third Conference¹ took place in Tokyo in 1972 under the title "Adult Education in the Context of Continuing Education." At this conference, the term *functional literacy* was coined and subsequently adopted worldwide. The intention was to point to the relationship that should be achieved between literacy training and socioeconomic development, including political participation.

The conference recommendations concluded that adult education should be considered: (a) an instrument of conscientization,² of socialization, and of social transformation that wishes to create a society that is aware of the values of social solidarity; (b) an instrument for the development of the total *social being*, conceived in the holistic sense of the world of work, leisure time, civic life, and family life that would tend to improve the physical, moral, and intellectual life of societies and individuals; (c) an instrument to prepare for productive activity and the management of economic enterprises; and finally, (d) an instrument of struggle against economic and cultural alienations and the elaboration of a national, liberating, and authentic culture.

Fifteen years later, the Fourth Conference took place in Paris, called "The Development of Adult Education: Aspects and Trends." It drew attention to the importance of adult education in the process of democratization within societies, stressing in the final recommendation that all members of a society have the following rights and that adult education should help in accomplishing these rights: (a) the right to read and write; (b) the right to criticize and analyze; (c) the right to imagine and create; (d) the right to in-

interpret their own reality and write their own history; (e) the right of access to educational resources; and (f) the right to develop individual and collective capacities.

Because UNESCO works with agreements that capture the collective consensus of the international participants on the issues being discussed, these recommendations ought to be generalizable. Unfortunately, the general recommendations and the basic documents produced by these conferences have not led to conceptual clarity about what adult education is or ought to be. What Lowe noted in 1975 is largely true today. The term is still regularly used in three ways: (a) to designate the education of adults; (b) to describe collectively all the persons and agencies in a country or globally which provide for education of adults; and (c) to specify an area of academic scholarship (p. 20). Moreover, the problem of definition is compounded by the use of terms considered similar, synonymous with, related to, or included in the adult education field such as nonformal education, distance education, open education, postsecondary education, lifelong education, community development, human resources development, continuing education, popular education, workers' and trade-union education, cooperative education, and adult basic education. It is fundamental to classify exactly the different subjects of study in adult education.

The content and organization of this thematic issue is intended to enhance our understanding of the nature and the promise of adult education. It begins with a series of articles that attempt to clarify a number of theoretical issues. La Belle assesses the human capital approach to industrialization in South America and the Caribbean, while Arnove and Graff offer some insights about literacy campaigns from an historical and comparative analysis of experience in many countries. From a Canadian perspective, the meaning and measurement of literacy are examined by Fagan, and Pannu looks at the forces that shape the political economy of adult education. Five articles follow providing descriptions of adult education systems and subsystems. Schmelkes and Narro sketch the programs and problems of adult education in Mexico, and Sumra and Bwatwa do likewise for Tanzania. Certain features of the Alberta scene are elaborated and appraised: Torres outlines an analytical framework for adult education; Small reports on the preparation of adult educators; and Carney traces the evolution of adult native education. The issue concludes with two articles dealing with the conduct of research. Latapí evaluates the premises and potential of participatory research. The main dimensions of the comparative research project noted earlier are summarized by Bacchus and Torres.

This endeavor would not have been possible without the cooperation, talent, and hard work of all the authors; the support and help of the regular editor, Wally Worth; and the assistance of Barbara Shokal, Elizabeth Lange Christensen, Kate Ballash, and Naomi Stinson in the publication process. The grants-in-aid from the International Development Research Centre (IDRC) and the Department of Educational Foundations are also much appreciated.

As guest editor of this issue, I should offer to all of them my apologies for continuously posing pressing demands on top of their already busy schedules, and I thank them for making the organization of this issue an enjoyable experience. If the readers find this issue useful for their research, teaching, and practical activities, its purpose will have been accomplished.

Notes

1. The First World Conference sponsored by UNESCO took place in Elsinore in 1949 in the aftermath of World War II and in the context of a devastated Europe. Its title was "World Conference on Adult Education." The Second Conference took place in Montreal in 1960 in an improved material, economic, and political context. Not surprisingly, the title of this conference was "Adult Education in a Changing World" (Gajardo, 1985).
2. The neologism "conscientization" is a term coined by the Brazilian pedagogue Paulo Freire and accepted world wide as an important contribution to adult education. For a discussion of the term, see Freire (1985).

References

- Freire, P. (1985). *The politics of education. Culture, power and liberation*. Amherst: Bergin & Garvey.
- Gajardo, M. (1985). Educación de adultos: De Nairobi a Paris. *Revista Latinoamericana de estudios educativos*, XV(3), 69-82.
- Giroux, H. (1983). *Theory and resistance in education: A pedagogy for the opposition*. Amherst: Bergin & Garvey.
- Jarvis, P. (1985). *The sociology of adult and continuing education*. London: Croom Helm.
- Keddie, N. (1980). Adult education: An ideology of individualism. In J.L. Thompson (Ed.), *Adult education for a change* (pp. 45-64). London: Hutchinson.
- La Belle, T.J. (1986). *Non-formal education in Latin America and the Caribbean: Stability, reform or revolution?* New York: Praeger.
- La Belle, T.J. (1987). Nonformal education in Latin America and the Caribbean: Status and trends. *Third World Affairs* (Yearbook, pp. 434-446). Third World Foundation for Social and Economic Studies.
- Lowe, J. (1975). *The education of adults: A world perspective*. Toronto: UNESCO-OISE.

THOMAS J. LA BELLE

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Nonformal Education for Industrialization in Latin America: The Human Capital Approach

Human resource training strategies, based on a human capital approach, have been the dominant paradigm for social change during the 1950-1970s in Latin America. Policy makers, practitioners, and scholars have argued that this educational approach was a precondition for the continuance of the industrial growth model that has been followed in the region. This article examines both the assumptions and the outcomes of the industrial growth model that incorporates human capital strategies and offers a critical assessment of the nonformal educational strategies of technical/vocational training, diffusion of information, and community organization.

Industrial development has been the objective of most change-oriented programs in Latin America and the Caribbean since the turn of the century. Although such development was often implicit rather than explicit in national efforts until the 1940s and 1950s, the model of development has been based on industrial growth complemented by manufacturing, agricultural investment, and extraction of basic minerals.

Over time, according to the model, the economy will expand and diversify its agricultural and industrial production, thereby creating employment opportunities, higher wages, and consumer products to foster a better standard of living. The modern sector is expected to expand and spread throughout all areas of the economy. Ultimately, it should incorporate the more traditional sectors and thereby provide more productive and higher income activities for the poor.

Often referred to as the trickle-down approach in the development process, this industrialization model posits education as an investment in human capital for achieving social and economic progress. Harbison (1973), for example, speaks about the importance of maximizing skill and knowledge through training followed by the effective utilization of that developed human capital through the creation of jobs. The consequences of such steps are to be economic growth, enhanced levels of living, and a more equitable distribution of income. In accordance with the equilibrium assumptions of this theory, formal and nonformal education are used to socialize the population to participate as citizens in the nation's existing political, economic, and cultural institutions. Likewise, education is intended to provide skills necessary to manage the various aspects of an in-

Dr. La Belle is Dean of the School of Education and the author of *Non-formal education in Latin America and the Caribbean* (1986).

dustrial economy and to facilitate its growth through the adoption and use of modern technology. Education is also intended to rationalize the borrowing and adoption of skills and knowledge from the United States and Western Europe, where the process of industrialization is well developed.

For much of the 20th century, out-of-school education for human resource development has evolved from one label to another in response to various economic and political incentives. Each of these efforts—agricultural extension, literacy programs, fundamental education, community development, integrated development, cooperatives—has been tried and assessed. Often the origin of these adopted patterns can be traced to outside influences such as that of the United States in agricultural extension or UNESCO in adult basic education.

By the 1950s, community development became prominent as a concept for dealing with the comprehensive nature of social action at the local level. However, by the mid-1970s, there was a growing recognition of the complexities of local-level change and a realization that a single intervention, like adult basic education or agricultural extension, would not be effective in isolation from other equally important elements (Kotter, 1974). The result of this posture was the application of U.S. and multilateral support to integrated development efforts that were coordinated either by a single agency or by a combination of agencies. Put aside were the self-help and psychological emphases of community development. In their place were installed multiple interventions aimed at simultaneously changing many aspects of the community, including credit arrangements, applied technology, land reform, group organization, and knowledge transmission. All of these were geared primarily toward economic ends. Cooperatives were often chosen as a means to organize the population economically.

Critique of the Industrial Model

While all these nonformal education efforts have been designed to contribute to industrial growth, they typically have fallen short of expectations in promoting modern skills, attitudes, and behaviors among the poor. Although the industrial growth model often appears successful because of the reliance on macroeconomic indicators like the GNP to judge its progress, the reality of Latin America and the Caribbean is often local dependency, repression, inequality, and poverty (Figueroa Unda, Gallardo, & Lafarga, 1979). Is unequal development inherent in the industrial model and the capitalist system? Do nonformal education programs within the industrial model actually contribute to the elite's position of wealth and power?

Affirmative answers to these questions come from the most vocal critics of the industrialization growth model. Their critique begins by pointing to two modes of production, typically referred to as the capitalist and the traditional modes. The capitalist mode is characterized by workers who do not own what they need to secure their livelihood, but who sell their labor for wages in factories, large business offices, and modern plantations. The traditional mode of production is characterized by producers who own or exercise considerable control over the means of production such as in family farming, communal production, or handicraft production. As the economy

expands to process raw materials and to manufacture machinery and equipment for the industrial sector and its subsidiaries, it is necessary that labor be recruited from those involved in the traditional mode. Recruitment is carried out through mechanisms primarily determined by capitalists and includes both formal and nonformal education processes as education is unavoidably intertwined with the main economic relations of a society (Bowles, 1980).

Because the success of the capitalist mode depends on keeping the size and cost of the labor force low, capitalist interests promote a reserve set of potential wage earners ready to assume the responsibilities of those who are currently employed. Carnoy (1980) argues that in dependent economies, unemployment will be higher among the poor because they are less schooled and are in less demand than their middle- and upper-class counterparts. He says that the unemployment problem must be understood as being dependent on those who make the decisions regarding the demand for labor, the adoption of labor-saving technology, the choice of production, the working laws and conditions, and the methods of production on the factory floor, rather than on educational curricula and the training process. Ibarrola and Reynaga (1983) complement this position by pointing to the primacy of the job and workplace rather than educational preparation in explaining industrial productivity.

The capitalist class in the region must acknowledge its own dependent position relative to worldwide political and economic decision making and the need to align with government to secure stability. As government must contend with the power of multinational capitalists, and because it secures its funds for the public sector from economic growth, government tends to support the capitalist class in its industrial goals. As the industrial growth process depends on the traditional sector for labor recruitment, it finds that individuals from that sector do not possess the skills and attitudes necessary to be successful wage earners. Human capital formation, therefore, is designed to produce a labor force that is skilled as well as resigned to working productively in a hierarchical system which depends on compliance and commitment.

Educational programs assist in this process by pursuing a prescriptive curriculum and pedagogy that are in the interests of the state, that are teacher centered as opposed to student centered, and that act as sorting and recruiting mechanisms to ensure that the capitalist mode can continue to reproduce the existing social relations of production. Relatively little learner initiation or participation in educational decision making is fostered, and the learner becomes a client whose compliance, discipline, and ability to follow instructions are rewarded.

Along with the unequal benefits derived from the industrial growth model, thus exacerbating the gap between rich and poor, educational programs that serve this framework are viewed as perpetuating a two-tiered educational system. The bottom tier, intended for the masses, offers limited educational provision of low quality, while the top tier involves extensive schooling of relatively high quality for the selection and training of

members of the dominant class. Nonformal education is generally associated with the bottom tier because, compared with formal schooling in the region, it receives little investment, and the learning it promotes among the poor—primarily manual skills—ultimately benefits the capitalists or other dominant elites, for it is they who control production (Rebeil, 1979; Torres, 1983). Because education is perceived as a means of socioeconomic mobility, its demand is high from the lower class as they wish to gain access to a better quality of life. But because the probability of succeeding in educational programs, in and out of schools, is much lower among the poor, they often become frustrated and inclined to blame themselves for their failure (Tovar Gómez, 1980).

In sum, critics argue that the lack of success in most nonformal education programs—whether it is literacy, basic education, agricultural extension, community development, integrated development, or cooperatives—has less to do with the strategies and methods adopted than it does with the dynamics of the industrial growth model.

Human Resources Strategy

The development of human resources as a nonformal education strategy reflects the age-old view that a nation's prosperity is determined mainly by the skill, dexterity, and judgment with which its labor is generally applied. In the 1950s and 1960s, economists began referring to this view as human capital or a concern with the workforce and its contribution to economic development. Gordon (1972) characterizes the orthodox economic assumptions underlying the human capital approach as follows: product and labor markets are competitive; firms attempt to maximize profits; workers seek to maximize earnings; and the labor force has both knowledge and mobility to take advantage of the best opportunities available. This perspective regards the labor market as essentially homogeneous with salaries determined by the interaction of supply and demand, with workers paid in accordance with each one's contribution to the firm's production. Verhine (1982) also points out that the orthodox conception of the economy assumes that the labor market tends toward a state of equilibrium and that both employers and employees benefit mutually from their investment and work. Within this set of assumptions, workers' skills and abilities are viewed as a form of capital because they are assumed to affect the workers' productivity and benefit the worker through employment opportunities, wages, and economic security.

Education contributes to the human capital model as a major means to acquire knowledge and skills. Through general and specific training it is assumed that the poor and disenfranchised can gain skills and thereby raise productivity and income. Health, family planning, and related programs are typically adjuncts to human capital approaches because poor health and high birth rates are considered drains on resources and limits to a high quality work force. Likewise, literacy programs are assumed to be a major contributor to raising work force quality. The World Bank is probably the most articulate and outspoken advocate of both the orthodox economic point of view and the human capital approach, especially as they relate to

formal schooling (Habte, Psacharopoulos, & Heyneman, 1980). Harbison (1973) has articulated the link between nonformal education and human capital theory.

The strategies for developing human resources as human capital emphasize individual change rather than structural change and appear to fall into three major categories. These are technical/vocational training, diffusion of information, and community organization and development.

Technical/Vocational Training

Industrial training and skill training are intended either to provide an individual with skills to secure a job or to upgrade an individual's skills on the job. Here, nonformal education often occurs in institutions¹ and must compete with formal schools in the training functions, must deliver usable skills or provide the basis for later training, and must provide legitimate credentials respected in the marketplace.

The principal problems associated with technical/vocational training can be traced to the lack of articulation between the training and work opportunity and/or market. The more isolated the training process is from the point of application of the training, the less effective it is. There are two major reasons for this. First is the time lag. Training programs are complicated to plan, and the start-up time, plus the recruitment and training time, may extend over several years. Thus the risk increases that when individuals complete their training, the opportunities that once existed may no longer exist. Second, to be effective a training program needs to have a close relationship to the job tasks at the actual work site. This means that training programs must have up-to-date equipment as well as knowledgeable and experienced instructors. Often this is not the case.

Although there do not seem to be any new strategies to confront this dilemma of distance between training and work, there are some long-standing regional program models that have attempted to resolve this problem. One of these is SENAI (National Apprenticeship Service of Industrial Training) in Brazil that involves the collaboration of industry and government in the training of the industrial labor force with the educational programs maintained through the financial contributions of industrial employers (Abreu, 1968; Edfelt, 1975; United States Agency for International Development, 1972).

Diffusion of Information

The second type of program strategy is much broader, encompassing more than the world of work and usually occurring outside of institutions. It relies on the transmission of skills and information for adapting the individual and group to the existing society. Program planners must develop successful communication media to diffuse information. They face the difficult task of changing behavior within a community while encountering, but avoiding conflict with, the political and economic structures which reinforce such behaviors. This strategy is derived from the trickle-down and modernization² concepts of the 1950s and 1960s and is based on communications research.

The use of media in nonformal education is often directed primarily to rural audiences, notably small farmers. Relatively little is known about the impact of such agricultural extension efforts. Studies done on the effects of education on farm productivity present mixed results (Lockheed, 1980). Explanations for problems associated with agricultural extension are well known: poor quality of training; separation of the extension agent from the people served; and the structural constraints inherent in markets, land size and tenure, and credit.

A second application of the diffusion of information concept is in improving health status. Here we know even less about program impact. Although there is some evidence that formal schooling is inversely related to such things as mortality (Cochrane, 1980) and positively related to birth control practices (Garcia, 1976) and that nonformal education programs in the health delivery field have an impact on the knowledge of the targeted audience (White, 1977), there is a dearth of literature exploring the impact of such programs on other outcomes, especially behavioral change and health status. As with agricultural extension, the viability of nonformal health programs from the human capital perspective is dependent on the mix of variables embedded in the social structure, from environmental conditions and delivery systems to the participants' habits, attitudes, knowledge, and income.

Literacy efforts constitute another area where the diffusion of information approach is dominant. Literacy programs have been common in most countries of Latin America because literacy rates are utilized as a major indicator of national development and because there still exists a strong assumption, within the human capital approach, that illiteracy is a major obstacle to work force efficiency and productivity (Castro, 1976). Again, little evidence exists to assess the success of these efforts. Instead, it appears that increased school enrollment rates at the younger age levels, combined with normal death rates of the over 40-year age group, account for many of the gains that have been made.

Community Organization

A third type of strategy for developing human resources as human capital is that of organizing community groups. These efforts tend to cluster around two approaches. The first is psychosocial in orientation and is referred to as community action or community development wherein local inhabitants are organized to assess and act on community issues or problems. The second is oriented toward economic goals and usually involves organizing members of the community as a cooperative enterprise to enhance their economic status.

Human capital nonformal education for group action has received attention throughout this century in Latin America and the Caribbean. It was manifested in the late 1940s as UNESCO's fundamental education efforts, in the late 1950s and 1960s as a worldwide emphasis on community development, and in the 1970s as a more social structural approach called integrated development.

Whatever the derivation, there exists considerable variation among the assumptions underlying human capital community action efforts. However, the common emphasis is on the individual within the group—his or her perceptions, personality, and behavior. The innovation process itself is typically conceptualized as a mental process, and the acceptance of an innovation by one or more members of a community is supposedly dependent on how it is perceived by potential adopters. The critique of traditional community development activity centers on the reduced concern for material goals and the emphasis on changing the content of an individual's psyche. This emphasis is frequently justified in two ways. First, it is argued that a sense of personal identity and self-esteem is a valuable end in itself. Second, traditional community development advocates contend that changes will not last unless they are made an integral part of the individual's mental state.

Niehoff (1966) helps put this traditional community action strategy into perspective by conceptualizing the planned change process as part of an equilibrium paradigm involving two interacting forces: the action of the change agent and the reaction of the community that is expected to adopt the new ideas. Niehoff's schema assumes that individuals and groups operate primarily in accordance with their own desires as opposed to behaving primarily in response to existing social structural constraints generated by dominant groups.

Beginning in the early 1970s, there was movement away from such psychological models toward using the group rather than individuals as a means to confront social structural conditions. These confrontations remain uncommon, despite the relatively long period of time that the effectiveness of community development, as an individual psychological process, has been shown to be limited. Such limitations involve, for example, a dependence on outside change agents to act as conduits and brokers between the community and outside institutions; a frequent dependence by the change agent on the community for his or her own social and psychological needs (Hussein & Taylor, 1953); an isolation of most programs from parallel activities like land reform, regional economic planning, and market conditions (Adams, 1964; Pascoe, 1966); a lack of attention to the impact of community action efforts on tangible goals that raise production levels and living standards (Erasmus, 1961); and a lack of uniformity among such programs in concept, content, scope, and aims (United Nations, 1964).

These conclusions resulted in a push for integrated development. Integrated development efforts consolidated the assumptions of the functionalist, equilibrium paradigm. Attempts were made to analyze and act on community problems as complex, multivariate issues demanding multiple interventions in the various components of society (e.g., ideology, social organization, technology).

It is still common to find many programs in Latin America and the Caribbean that reflect this more integrated approach of altering not only an individual's behavior, but also some of the social structural constraints that restrict that behavior. However, there is now less talk about integrated development in the region, probably because of the difficulties experienced

in implementing such programs. A truly multiple-intervention strategy often exceeds the capability of a single agency. At the same time, attempting to secure the simultaneous participation of several social action agencies works against the tradition of agency independence and autonomy.

A second major reason for alleging that integrated development has foundered concerns the administrative and logistical problems encountered when attempting to put equilibrium change theory into practice. The delivery of goods and services on time, for example, requires of the community both good administrative skills and a sound understanding of the change process. Similarly, because community social action programs are premised on the assumption of maintaining the present socio-economic order that is associated with the human capital model (La Belle, 1976), they are frequently dependent on the existence of supportive political and economic structures rather than on the activities that the community generates. Consequently, communities seem to have difficulty sustaining community organizations and community institutions such as schools and health centers once a community action agency and change agent have withdrawn.

Implementing Community Action

The core of community action programs is the change agent, facilitator, or community development worker whose task is to assist or direct community groups as they organize themselves, make themselves aware of their problems, discern their potential for solving those problems, gather resources, and then implement systematic programs. Agents are usually trained through nonformal educational programs either to act as indigenous leaders of the community or to act as intermediaries between the agency and the community to implement the program's activities. Thus one problem for change agents and for the communities in which they work is the tendency to become overly dependent on each other. Sometimes the community depends too much on the change agent to act as a broker or intermediary with outside institutions such as government offices, foundations, and banks, while the change agent grows to depend on the community for emotional, psychological, and, in some cases, financial support.

The nature of an agent's involvement in the community varies in accordance with the program's goals and may not always create dependency problems. Beyond program goals, the effectiveness of the change agent is dependent on the nature of the community and the change agent's personality. Thus the goals and activities are often dependent on the actors involved and tend to reflect the specific interests of either the change agent or the segment of the community to which he or she is most attached. Such characteristics of community action efforts serve to limit the extent to which conceptual boundaries can be drawn around programs of community action and the related role of the change agent. This, in turn, has often prevented scholars from going beyond case studies in building an information base to guide practitioners. The result is that change agents have few

reference points because the conceptual basis for community action is so open-ended.

There are several case studies dealing with the implementation of community action (Ceara, 1983; Hurtado, 1983; Mauna & Rivera, 1978). However, the particularistic nature of program implementation in specific communities does not give rise to findings that are generalizable. One major reason for this lack of transfer arises from the tendency to rely on the history of past interventions in the particular community as a base for designing additional interventions. As a result, activities derive less from what is known (research) about successful interventions than from past experience, personal program preferences, and common sense.

Within the human capital model, community groups that are organized for economic ends often engage in more pragmatic activities aimed at broadening social participation and transforming capitalist macroeconomic systems into cooperative and communal movements (Dandler, 1976; Nash & Hopkins, 1976). Although cooperatives are the most common form of economic institutions at the community level in Latin America, in recent years other community-based enterprises such as worker-owned and managed stores have emerged. Yet they are still much less visible than cooperatives. The classic cooperative is one owned and controlled by its voluntary members, with each member usually having one vote, receiving the services of the cooperative at cost, and sharing the surplus earnings. In reality, cooperatives based on the human capital model seldom arise from popular movements. Instead, they are often legislated into existence and are used to satisfy bureaucratic requirements by enabling participants to receive technical assistance, land, or credit. They may also help to politically pacify peasants by associating cooperatives with the promise of a better life. Additionally, cooperatives are used by social service agencies as vehicles for the diffusion of information and technology.

Case study evidence of the experience of cooperatives in the region offers a mixed assessment of their performance. For example, Fals Borda, Apthorpe, and Inayatullah (1976), in their comparative study of rural cooperatives in Asia, Africa, and Latin America, found that cooperatives seldom achieve the goals set for them by social and economic planners, especially when such goals involve structural change.

Conclusions

The picture that emerges from this review of the human capital approach to development is one of individual behavior change among the poor through technical/vocational training, agricultural extension, health programs, and literacy efforts, that is relatively impotent in the face of social structural constraints. The outcomes for poor adults are not significant, especially when the goals go beyond transmitting information and skills and are measured in terms of material gains such as job acquisition, agricultural production, income, and health status.

Common sense and observation suggest that many individuals, particularly from the poorer strata, receive their information from community institutions developed by cultural practices and traditions (i.e., church-re-

lated channels, community folklore), as well as from commercial establishments, rather than from specialized education programs. Traditional channels of information that exist in the community may be more powerful sources of educational information than those which human capital nonformal educators create. If community channels are powerful resources for education in the community, they have yet to be studied or used effectively as part of the human capital approach.

The unintended effects of nonformal education programs dare not be overlooked. It is likely that the lack of employment opportunities in the region, combined with a traditional emphasis on technical/vocational training in schools and nonformal institutions, may promote employment in the informal labor market. Therefore, the unintended effect of nonformal education programs may be to foster an area of the economy (i.e., "underground" economic exchange and informal economics) from which the government fails to secure revenue. But above all, informal sectors of the economy are at a disadvantage as they must compete with businesses in the formal sector that are legitimate and that contribute through taxes to the well-being of the state.

Human capital planners and practitioners may be utilizing the wrong institutions and eliciting the wrong outcomes because of the nature of the human capital assumptions about the importance of particular types of educational preparations and the appropriate means for social change. Furthermore, although some form of community organization is necessary for socioeconomic change to occur, it is apparent that community development programs, community enterprises, and cooperatives are characterized by both internal and external problems that limit their effectiveness. They are often overly dependent on entrenched local elites and on assistance offered by external agencies subject to political conditions over which they have no control, and they lack a sufficient power base to be economically competitive with large commercial establishments. Also, such organizations lack the leadership that can relate to the wider socioeconomic environment in terms of the knowledge and skills that characterize that environment.

Empowering the poor beyond the prospects of individual mobility within capitalist states would seem to require a different form of community organization which would challenge the vested interests of the entrenched elite. Psychological-oriented or integrated development approaches may not be viable strategies for change, nor are they sufficient in their attempts to create a federation of local cooperatives or economic units. Whatever the new organizational form, relatively rapid social transformation for large segments of the poor through human capital approaches seems unlikely within the existing constraints of capitalism. Perhaps the best that can be hoped for is that there will be some long-term cumulative impact that will encourage more effective strategies for social change.

Notes

1. I define nonformal education as "any organized, systematic educational activity carried on outside the framework of the formal system to provide selected types of learning to particular subgroups in the population, adults as well as children."

2. Modernization theory has been the dominant paradigm in the sociology of national development in the 1950s and 1960s. For a discussion see La Belle, 1986; Inkeles & Smith, 1974; Chilcote, 1981.
3. My thanks to Christopher R. Ward, doctoral student in the School of Education, University of Pittsburgh, for assistance with this article.

References

- Abreu, J. (1968). Craft and industrial training in Brazil: A socio-historical study. In J.A. Lauwerys & D.G. Scanlon (Eds.), *World yearbook of education 1968: Education within industry* (pp. 210-225). London: Evans Brothers.
- Adams, R.N. (1964). The Latin American community in revolution and development. In J.P. Augelli (Ed.), *The community in revolutionary Latin America* (pp. 5-10). Lawrence: University of Kansas, Center for Latin American Studies.
- Bowles, S. (1980). Education, class conflict and uneven development. In J. Simmons (Ed.), *The education dilemma* (pp. 205-231). New York: Pergamon.
- Carnoy, M. (1980). Can education alone solve the problem of unemployment. In J. Simmons (Ed.), *The education dilemma* (pp. 153-164). New York: Pergamon.
- Castro, C. de M. (1976). Alfabetización funcional y desarrollo económico—programa ECIEL. *Educación hoy: Perspectivas Latinoamericanas*, 6(35), 26-40.
- Ceara. (1983). Secretaria de Educação e Instituto Interamericano de Cooperação para a Agricultura (IICA). *Educação rural integrada: A experiência de pesquisa e planejamento participativo no Ceara*. Rio de Janeiro: Editora Pax Terra.
- Chilcote, R.H. (1981). *Theories of comparative politics: The search for a paradigm*. Boulder, CO: Westview Press.
- Cochrane, S.H. (1980). *The effects of education on health*. World Bank Staff Working Paper No. 405. Washington, DC: World Bank.
- Dandler, J. (1976). Peasant sindicatos and the process of cooptation in Bolivian politics. In J. Nash, J. Dandler, & N. Hopkins (Eds.), *Popular participation in social change: Cooperatives, collectives and nationalized industry* (pp. 341-352). The Hague: Mouton.
- Edfelt, R. (1975). Occupational education and training: The role of large private industry in Brazil. In T.J. La Belle (Ed.), *Educational alternatives in Latin America: Social change and social stratification* (pp. 384-413). Los Angeles: UCLA Latin American Center.
- Erasmus, C.J. (1961). *Man takes control*. Minneapolis: University of Minnesota Press.
- Fals Borda, O., Apthorpe, R., & Inayatullah, M. (1976). The crisis of rural cooperatives: Problems in Africa, Asia and Latin America. In J. Nash, J. Dandler, & N. Hopkins (Eds.), *Popular participation in social change: Cooperatives, collectives and nationalized industry* (pp. 439-456). The Hague: Mouton.
- Figueroa Unda, M., Gallardo, I., & Lafarga, J. (1979). Datos básicos y directivas para la elaboración de un programa de investigación educativa. In D. Morales-Gomez (Ed.), *La educación y desarrollo dependiente en América Latina* (pp. 49-84). Mexico City: Ediciones Gernika.
- Garcia, B. (1976). Anticoncepción en México rural. *Demografía y Economía*, 10(3), 297-351.
- Gordon, D.M. (1972). *Theories of poverty and unemployment*. Lexington, MA: D.C. Heath.
- Habte, W.D., Psacharopoulos, G., & Heyneman, S.P. (1980). *Education: Sector policy paper*. Washington, DC: World Bank.
- Harbison, F. (1973). *Human resources as the wealth of nations*. New York: Oxford University Press.
- Hurtado, L. (1983). Investigación para la innovación en educación no formal. *Investigaciones educativas Venezolanas, Boletín Informativa* 3(2).
- Hussein, A., & Taylor, C.C. (1953). Report of the mission on rural community organization and development in the Caribbean area and Mexico. *Series on Community Organization and Development*, 4(9). New York: United Nations.
- Ibarrola, M., & Reynaga, S. (1983). Estructura de producción, mercado de trabajo y escolaridad en México. *Revista Latinoamericana de Estudios Educativos*, 13(3), 11-81.
- Inkeles, A., & Smith, D.H. (1974). *Becoming modern: Individual change in six developing countries*. Cambridge, MA: Harvard University Press.
- Kotter, H.P. (1974). Some observations on the basic principles and general strategy underlying integrated rural development. *Monthly Bulletin of Agricultural Economics and Statistics*, 23(4), 1-12.

- La Belle, T.J. (1976). *Nonformal education and social change in Latin America*. Los Angeles: UCLA Latin American Center.
- La Belle, T.J. (1986). *Non-formal education in Latin America and the Caribbean: Stability, reform or revolution?* New York: Praeger.
- Lockheed, M. (1980). *Farmer education and farm efficiency: A survey*. EDCC.
- Mauna, N., & Rivera, E. (1978). Educación de adultos campesinos: Una experiencia de comunicación social desarrollada en el distrito de riego no. 85 'La Begona,' Municipio de Celaya, Guanajuato, por el Centro Nacional de Productividad de México, A.C. *Revista inter-americana de educación de adultos* (pp. 776-802). Santiago: OEA.
- Nash, J., & Hopkins, N.S. (1976). Anthropological approaches to the study of cooperatives, collectives and self-management. In J. Nash, J. Dandler, & N. Hopkins (Eds.), *Popular participation in social change: Cooperatives, collectives, and nationalized industry*. The Hague: Mouton.
- Niehoff, A.H. (Ed.) (1966). *A casebook of social change*. Chicago: Aldine.
- Pascoe, S.J. (1966). Community development trends in the region. In E. de Vries (Ed.), *Social research and rural life in Central America, Mexico and the Caribbean Region* (pp. 151-165). Paris: UNESCO.
- Rebeil, M.A. (1979). Educación no formal en áreas rurales Mexicanas. In D. Morales-Gómez (Ed.), *La educación y desarrollo dependiente en America Latina* (pp. 233-256). Mexico City: Ediciones Gernika.
- Torres, C.A. (1983). Adult education policy, capitalist development and class alliance: Latin America and Mexico. *International Journal of Political Education*, 6, 157-173.
- Tovar Gómez, M. (1980). Educación de adultos y desarrollo integral. *Educación No Formal Para Adultos: Algunos Temas* 3(6), 1-13.
- United Nations, Economic Commission on Latin America. (1964). Popular participation and principles of community development in relation to the acceleration of economic and social development. *Economic Bulletin for Latin America* 9(2), 225-255.
- United States Agency for International Development. (1972). *Brazil: Education sector analysis*. Rio de Janeiro: United Nations Agency for International Development, Human Resources Office.
- Verhine, R. (1982). Educação e mercado de trabalho: Perspectivas alternativas e suas implicações para o problema de pobreza. *População, Educação, Emprego*, 2, 85-132. Salvador: Universidade Federal da Bahia.
- White, R.A. (1977). Mass communication and the popular promotion strategy of rural development in Honduras. In P.L. Spain, D.T. Jamison, & E.G. McAnany (Eds.), *Radio for education and development: Case studies*, Vol. 1. Washington, DC: World Bank.

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What Have National Literacy Campaigns Taught Us?

Literacy campaigns are considered in historical and comparative perspective and some lessons are drawn. The importance of both national will and local initiative are stressed, particularly in regard to overcoming opposition and reaching neglected populations. According to the authors, the meaning and uses of literacy are contextually determined, and as social contexts change so do definitions of what constitute adequate literacy skills. The authors conclude with some observations about future policies and practices in industrialized countries such as Canada.

Recently, the existence of substantial pockets of illiteracy in industrialized countries has attracted public attention. Limage (1986), in a review of illiteracy in the United Kingdom, France, and the United States, points out that most developed nations are beginning to recognize that there are still millions of people in their populations who are completely illiterate or semi-illiterate in spite of long-standing formal education systems through which virtually all adults have passed (p. 50). Estimates for the United States, for example, have ranged over the past eight years from a low of less than 1% to over 33%, depending on what definitions and measures of literacy have been used (Kozol, 1986, p. 27). The State of California estimates that perhaps as many as four to seven million of its residents are at various stages of illiteracy or semiliteracy. In the face of these dramatic statistics, there have been calls for literacy campaigns that transcend the limitations of traditional, uncoordinated, local, and largely private sector literacy training. Kozol (1985), in his polemical *Illiterate America*, is one of the most articulate advocates of a mass mobilization on behalf of literacy instruction that would resemble in urgency and scope those campaigns in Cuba in 1961 and Nicaragua in 1980.

Similar alarms have been sounded in Canada. *Literacy in Canada: A Research Report* (1987) has argued that perhaps as much as one fourth of the Canadian adult population is, in one way or another, illiterate. Four years earlier, an occasional paper for the Canadian Commission for

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UNESCO documented the existence of large numbers of undereducated Canadians whose low levels of literacy might place serious limitations on their participating fully in the rights, responsibilities and privileges of citizenship (Thomas, 1983). This paper, *Adult Illiteracy in Canada—A Challenge*, also examines developments in adult education in Great Britain, Australia, and the United States, and the history of literacy activities in Canada, to discern what might be reasonable approaches to the provision of effective adult education. Along similar lines, we wish to offer some lessons culled from our examination of efforts at literacy provision in more than a dozen societies over the past 400 years.¹ Among these lessons are (a) that literacy efforts need to last long enough to be effective; (b) that local initiative should be mobilized in conjunction with national will; (c) that there will be a significant minority who will oppose or not be reached by literacy efforts of centralized authorities; (d) that eventually emphasis will have to be placed on schooling for youth (in order to head off future illiteracy); and (e) that literacy must be seen or understood in its various contexts.

Literacy Campaigns

In a UNESCO-commissioned review of 20th century national literacy campaigns, Bhola (1982) defines a literacy campaign as “a mass approach that seems to make all adult men and women in a nation literate within a particular time frame” (p. 211). He notes that “a campaign suggests urgency and combativeness; it is in the nature of an expectation, it is something of a crusade” (p. 211). Sometimes large-scale attainment of literacy becomes the moral equivalent of war. By contrast, a “literacy program ... even though planned, systematic and designed-by-objectives may lack both urgency and passionate fervor” (p. 211).

Although a limited time frame is considered to be a defining characteristic of a mass campaign, those national cases frequently pointed to as exemplars of 20th century literacy mobilizations commonly took two or more decades. Bhola's examples include the USSR (1919-1939), Vietnam (1945-1977), the People's Republic of China (1950s-1980s), Burma (1960s-1980s), Brazil (1967-1980), and Tanzania (1971-1981). Only the Cuban literacy campaign spanned a period of one year. The Nicaraguan Literacy Crusade of 1980, not studied by Bhola, lasted only five months, but immediately following the 1980 *Cruzada*, the Nicaraguan government instituted a campaign in indigenous languages for non-Spanish-speaking populations of the Atlantic Coast Region, and it established, in the same vein as Cuba, a program of continuing basic (popular) education. Some seven years after the 1980-81 mobilizations, there are renewed calls for a campaign to reach those adults who have lapsed into illiteracy because of the war situation.

As literacy campaigns are usually initiated during periods of upheaval, revolutionary transformation, and civil strife, the difficulty of achieving and sustaining lofty educational goals—which frequently characterize new political regimes—is not surprising. The Soviet Union, for example, stands out as the first case of a country adopting a war-siege mentality to combat illiteracy. The December 29, 1919 Decree on Illiteracy required all illiterates eight to 50 years of age to study, empowered local Narkompros (People's

Commissariats of Enlightenment) to draft citizens to teach, and made it a criminal offense to refuse to teach or study (Kenez, 1982, pp. 180-181). Five years after the passing of comprehensive legislation, the establishment of a national literacy agency and of "liquidation points," Minister of Education Anatoly Lunacharsky complained that "the society for the liquidation of illiteracy passes wonderful resolutions, but the concrete results of its work are despicable" (Pethybridge, 1974, p. 152). N.K. Krupskaya, Lenin's wife and a renowned educator, complained 10 years after the passage of the 1919 literacy decree that not a single article had been implemented (Eklof, 1987, p. 131).

National Will and Local Initiative

While it may take 10 years or more for a campaign to take hold, nationally orchestrated literacy programs are usually preceded by grassroots initiatives. Moreover, the fanfare heralding tremendous achievements brought about by new political regimes generally obscures local educational efforts and accomplishments on which national policy makers build (Eklof, 1987; Hayford, 1987; Rawski, 1979).

Perhaps the most striking example of the successful attainment of high literacy levels through decentralized efforts is that of 19th century America. Unlike the German, Swedish, and Scottish campaigns of the 17th and 18th centuries, there was no centrally determined policy that brought the power and resources of the nation-state to bear on the problem of literacy. Instead, the competition of religious denominations, the proliferation of religious and secular presses, the exhortation of leading secular and clerical authorities, and local civic initiative came together to promote literacy activities (Stevens, 1987, pp. 99-122). Most activity was organized and directed by the individual states rather than by the federal government. The United States experience seems particularly relevant to Canada, where education is a provincial responsibility.

In the 20th century, the most striking examples of mobilization involve national, centrally organized efforts that are waged in terms of a "war on ignorance." But these efforts also have depended heavily on local initiative and popular organizations to recruit teachers and to implement instructional activities. The People's Republic of China, with the most massive mobilization of people (over 137 million), was, according to Bhola, centrally instituted and nationally orchestrated but carried out in a decentralized manner, leaving much to local choice and initiative (Bhola, 1982, pp. 85-90). China illustrates in extreme form the importance of national political will to achieve wide-scale literacy in a poor country (Bhola, 1982, p. 98). Other prominent examples include Cuba, Tanzania, and Nicaragua. By contrast, advanced industrialized countries like the United States, the United Kingdom, and France represent societies that have not committed the resources and efforts necessary to resolve substantial literacy problems (Limage, 1986). Similarly, Thomas (1983, p. 89) has pointed out that national commitment and popular participation (two principles identified by the International Council for Adult Education as critical to the attainment

and retention of literacy) have been lacking at the national level in Canada. However, as she notes, "there is a strong commitment from numerous individuals across the country at the micro-levels" (Thomas, 1983, p. 89). The significance of these local efforts should not be downplayed or overlooked.

The success of large-scale mobilizations, particularly in socialist countries, is often the function of mass organizations such as youth, worker, neighborhood, defense, and women's associations. A national campaign, by mobilizing large numbers of people and strengthening mass organizations, creates opportunities for large-scale citizenship participation in decision making. But such mobilizations and organizations may also serve as instruments for exercising cultural and political hegemony by dominant groups or state apparatuses.

Resistance

History offers countless examples of people, individually and collectively, resisting such attempts. The German literacy drives elicited such responses from peasants as early as the 16th century. Russia offers abundant instances before and after the 1917 revolution of peasant populations setting up their own schools and employing reading materials that did not accord with the designs of state authorities. Eklof (1987) chronicles peasant attacks on state appointed teachers in the late 1920s and early 1930s. He also describes how, despite intense efforts at censorship, readers pursued their own interests, frequently of an escapist nature: "Library subscribers took out books on politics in far smaller number than their availability. Books checked out were concentrated in the areas of travel, biography, and history (primarily on World War II, military memoirs, spy documentaries, regimental histories)" (p. 124).

Similar accounts of reading habits from Tanzania and China indicate that peasants and workers may be less interested in reading about how to construct a latrine or organize a cooperative than they are in romance and adventure stories. Gillette (1987), who participated in the evaluation of the UNESCO-sponsored 11-country Experimental World Literacy Program (1967-73), sums up the difficulty of controlling outcomes of literacy campaigns:

Happily, literacy like education more generally cannot be reduced to behavioral conditioning. It endows people with skills that they can (although do not always) use to receive and emit messages of an almost infinite range, a range that in any event escapes the control of those who imparted literacy.... Literacy is potential empowerment. (p. 215)

Neglected Populations

In addition to the resistance of people to control, there are other seemingly intractable problems. Class, ethnic, racial, geographical, and gender differences in literacy acquisition have been ubiquitous over the past 400 years. Historically and comparatively, rural populations, the working class, ethnic and racial minorities, and women have been the last to receive literacy instruction and to gain access to advanced levels of schooling. As

various UNESCO publications reiterate, the world map of illiteracy is the map of poverty.

Women have been the most disadvantaged group. From the time of the Protestant Reformation, when household heads were held responsible by the state for literacy instruction and for supervising reading, men typically have benefited most from education campaigns. Moreover, when reading was extended to women, men received preference in the teaching of writing. However, in early modern Sweden and the 19th century United States, perceptions of women's special education "mission" at home, as mothers, and as schoolteachers propelled their rates of literacy upward, sometimes rivaling those of men. Recently, the Cuban and Nicaraguan campaigns have revealed a new potential for breaking this pattern. In both countries, a majority of the literacy workers were women. However, the results from other campaigns such as that in Tanzania indicate that women predominate at the lower levels of literacy attainment; at the highest levels, corresponding to functional literacy, males predominate (Kassam & Hall, 1985; Unsicker, 1987).

Despite the intensity and scale of efforts, and whether by intent or not, an unmistakable pattern emerges from an historical analysis of campaigns from cases as diverse as preindustrial Germany, the Soviet Union (1919-1939), Tanzania (1970-1983), and Nicaragua (1980-1986). Regardless of date, duration, or developmental level, approximately 85% adult literacy is achieved. The exception is Cuba, which claims that its 1961 campaign reduced the rate of illiteracy from 24% to 4% (Leiner, 1987). Nevertheless, an irreducible minimum remains of at least 10% to 20%. This finding places in question notions that, except for a small minority of severely handicapped and institutionalized populations, it is possible to achieve literacy rates of over 95% in advanced industrialized societies.

This historical pattern poses major challenges for future study. Among the questions that need to be researched are: who comprises this group of unreachable people; what factors and conditions are associated with non-literacy attainment (e.g., institutional discrimination; inappropriate language, methods, and materials of instruction; opposition to the legitimacy or ideological thrust of a political regime); and how are illiterate people treated by the increasingly literate population?

The Canadian UNESCO report on illiteracy in Canada pointed out that special consideration needs to be given to indigenous populations (Indians and Inuit) and immigrant populations for whom English or French are not first languages (Thomas, 1983, p. 13). In addition, the geographical isolation, as well as economic disadvantages, of indigenous groups tends to compound the difficulty of adequate provision of education. Moreover, although many of the recently arrived immigrants are better educated than preceding "new Canadians," there is still reason to be concerned with ESL (English as a Second Language) literacy in large reception centers (Thomas, 1983, p. 101).

As learning to read, possibly to write, involves the acquisition or conferral of a new status—membership in a religious community, citizenship in a

nation-state—literacy often carries tremendous symbolic weight, quite apart from any power and new capabilities it may bring. The attainment of literacy operates as a badge, a sign of initiation into a select group and/or a larger community. The opposite side of the coin is that those who do not participate in a campaign or who continue to be illiterate may be labeled as deviant and denied full membership rights in a more comprehensive community. Historically, as well as more recently, those who oppose literacy efforts may be viewed as dissident, unassimilated, counterrevolutionary, or enemies of the state.

Schooling as the Vehicle for Attacking Illiteracy

The intractability of adults who do not wish to learn in ways prescribed by state authorities or to be converted to a different set of beliefs is a common occurrence. An important legacy of the German Reformation campaigns is Luther's shift in attention to shaping the young, as opposed to his earlier focus on all members of the community (Strauss, 1978; Gawthrop, 1987, pp. 31-35). The dilemma faced by Luther, whether to concentrate literacy efforts on the young (who may be less "corrupted" and more malleable) or on adults, is a strategic issue in almost all subsequent mass campaigns. In 20th-century campaigns, despite initial large-scale efforts aimed at entire populations, a narrowing eventually occurs with greater emphasis placed on the formal education of the young.

It is not surprising that literacy provision and socialization of individuals over time have merged and been institutionalized in state systems of formal education. From the earliest campaigns, the goals of literacy provision have been the propagation of a particular faith or world view and the reading of prescribed texts under the supervision of teachers of certain moral persuasion and of an upright character. Historically, the religious orientation of school systems has given way to a more secular faith in the nation-state and/or the propagation of an ideology such as capitalism or socialism. State organized and regulated systems of schooling represent for political elites an efficient means of achieving these goals. While bureaucratic systems of education (with the attendant centralization of decision making, standardization of routines, and uniformity of curriculum) may bring certain benefits, such systems also lead to alienation and academic failure—perhaps illiteracy—of substantial numbers of individuals who do not fit into such structures.

Definition and Reappraisal

Literacy takes on meaning in particular historical and social formations. The status of literate persons and the multiple competencies that are required to interpret texts and communicate with others must be viewed in relation to the demands of specific settings. In industrialized societies, a variety of adjectives are now attached to definitions and notions of literacy; one commonly hears references, for example, to computer and scientific literacy, and even "cultural" literacy (Hirsch, 1987). As it is generally considered that more sophisticated reading and writing skills are required in more complex technological environments, and as comprehension of various

print materials includes background knowledge of both national and international contexts, there will be calls for renewed efforts to reach and impart literacy-related skills of a higher order. For these reasons, various federal task forces and the Canadian Commission for UNESCO have expressed concern about the literacy skills of individuals with less than nine years of schooling and especially those with less than five years of formal education.

On the other hand, a radical political economy critique of industrialized societies is likely to point out that a process of deskilling has been going on in the work force of countries like the United States (Apple, 1986; Bowles, Gordon, & Weisskopf, 1983; Braverman, 1976). If the fastest growing sectors of the economy are not in high technology areas involving robotics and computerization but in the service sector and in particular areas like fast food restaurants and security agencies, then there are unlikely to be sufficient economic incentives and rewards for individuals to develop higher order communication and computation skills. A radical critique also would point out that the Canadian economy itself is constrained by its dependence on the United States economy.

Concluding Reflections and Questions

Ultimately, contextual factors—the opportunities for using literacy skills, the transformations that occur in social structures, the ideology of national leaders—determine whether individuals acquire, retain, and use literacy skills. Whether literacy and post-literacy campaigns use materials and methods that are truly designed to equip people to play more active roles in shaping the direction of their societies, or instead use materials and methods aimed at inducting people into predetermined roles is a telling indication of the ideology and intent of these campaigns.

Once we assume that the necessary contextual factors obtain, we move on to other considerations. One set of questions concerns whether political and educational policy makers in Canada are willing to dedicate sufficient resources and time to the endeavor, while encouraging local initiative and input. Another set concerns the extent to which policy makers will take into account the reasons for resistance to such national efforts and find the means to reach populations previously ignored or discriminated against with materials and methods that serve the interests of these groups.

Although there has been a significant increase in Canadian literacy efforts since 1976 on the part of the federal, provincial, and local governments, the mass media, and various nongovernmental agencies, the overall effort may be considered fragmented, and public awareness and support may be lacking or inadequate to the challenge (Thomas, 1983, p. 89). Quebec is perhaps unique among the provinces in having recognized at the end of the 1970s the full extent of its illiteracy problem and having called for a "campaign." The Jean Commission (Thomas, 1983) noted that

The literacy campaign claims to be a special approach allowing adults to take charge of and control their own training process. To accomplish this, the campaign must get down to the grass-roots level and make use of organizations which have close ties with the adults concerned. (p. 84)

Whether Quebec's call for a literacy campaign had "a spearheading effect on the rest of Canada," (as Thomas hoped it might) remains to be seen (Hauteceur, 1978, 1979; Thomas, 1983, p. 84). What is more certain is that a mass approach will have to involve substantial federal attention as well as greater cooperation, if not coordination, of the various agencies and individuals involved in literacy instruction and adult basic education.

From current and past literacy campaigns, literacy planners and political leaders have learned a number of lessons about the factors that contribute to the success of a campaign or cause it to fall short of its goal. The extent to which international and national authorities have grasped the implications of these lessons and are committed to applying them remains in question. The lack of resolve of political and educational leaders in many nations may be attributed to the fact that widespread literacy within a populace can have uncontrollable, contradictory, and conflicting consequences (Graff, 1979; Levin, 1981). Reluctance on the part of policy makers is especially understandable in light of the rhetoric and ideology of recent national campaigns which have stressed literacy for "critical consciousness," "liberation," and "empowerment."

As noted in the Canadian Commission to UNESCO report (Thomas, 1983), literacy is fundamentally a political issue involving these questions:

What sort of society do we want? Are we seriously interested in improving the skills and training of the poorly educated? Will we make this a priority, and commit funds and expertise in an age of dwindling resources? Are we willing to allow one-quarter of the adult population of Canada to remain under-educated? (p. 9)

The report goes on to observe that these questions lead to others which "starkly clarify the values we put on people and their ability to realize their full potential" (p. 9).

Note

1. The chapters in our edited collection, *National Literacy Campaigns: Historical and Comparative Perspectives* (1987), examine Reformation Germany, early modern Sweden and Scotland, 19th-century United States, 19th and early 20th-century Russia and the Soviet Union, pre-Revolutionary and Revolutionary China, and a variety of Third World countries in the post-World War II period (Tanzania, Cuba, Nicaragua, and India). There also is a chapter on the UNESCO-sponsored Experimental World Literacy Program and the piece by Limage on recent adult literacy efforts in the United Kingdom, France, and the United States.

References

- Apple, M. (1986). *Teachers and texts: A political economy of class and gender relations in education*. New York: Routledge & Kegan Paul.
- Bhola, H.S. (1982). *Campaigning for literacy: A critical analysis of some selected literacy campaigns of the 20th century, with a memorandum to decision makers*. Paris: UNESCO/International Council for Adult Education.
- Bowles, S., Gordon, D.M., & Weisskopf, T.E. (1983). *Beyond the wasteland*. New York: Anchor Press/Doubleday.
- Braverman, H. (1976). *Labor and monopoly capital*. New York: Monthly Review Press.
- Eklof, B. (1987). Russian literacy campaigns. In R.F. Arnove & H.J. Graff (Eds.), *National literacy campaigns: Historical and comparative perspectives* (pp. 121-131). New York: Plenum.

- Gawthrop, R. (1987). Literacy drives in preindustrial Germany. In R.F. Arnove & H.J. Graff (Eds.), *National literacy campaigns: Historical and comparative perspectives* (pp. 29-48). New York: Plenum.
- Gillette, A. (1987). The experimental world literacy program: A unique international effort revisited. In R.F. Arnove & H.J. Graff (Eds.), *National literacy campaigns: Historical and comparative perspectives* (pp. 197-217). New York: Plenum.
- Graff, H.J. (1979). *The literacy myth: Literacy and social structure literacy campaigns in the nineteenth-century city*. New York: Academic Press.
- Hauteceœur, J.-P. (1978). *Analphabétisme et alphabétisation au Québec*. Québec: Ministère de l'éducation.
- Hauteceœur, J.-P. (1979). *Pour le développement de l'alphabétisation au Québec*. Québec: Ministère de l'éducation.
- Hayford, C.W. (1987). Literacy Movements in Modern China. In R.F. Arnove & H.J. Graff (Eds.), *National literacy campaigns: Historical and comparative perspectives* (pp. 99-122). New York: Plenum.
- Hirsch, E.D., Jr. (1987). *Cultural literacy*. New York: Houghton Mifflin.
- Kassam, Y., & Hall B. (1985). *Tanzania's national literacy campaign: A journey of imagination, energy, and commitment*. Unpublished paper, International Council for Adult Education, Toronto.
- Kenez, P. (1982). Liquidating illiteracy in revolutionary Russia. *Russian History*, 9, 180-181.
- Kozol, J. (1985). *Illiterate America*. Garden City, NY: Anchor Press/Doubleday.
- Kozol, J. (1986, October 30). Illiteracy statistics: A numbers game. *New York Times*, p. 27.
- Leiner, M. (1987). The 1961 national Cuban campaign. In R.F. Arnove & H.J. Graff (Eds.), *National literacy campaigns: Historical and comparative perspectives* (pp. 173-196). New York: Plenum.
- Levin, H. (1981, February). The identity crisis of educational planning. *Harvard Educational Review*, 51, 85-93.
- Limage, L. (1986, February). Adult literacy policy in industrialized countries. *Comparative Education Review*, 30, 50.
- Literacy in Canada: A research report*. (1987). Ottawa: Southam Communications.
- Pethybridge, R. (1974). *The social prelude to Stalinism*. London: Macmillan.
- Rawski, E.S. (1979). *Education and popular literacy in Ch'ing China*. Ann Arbor: University of Michigan Press.
- Stevens, E. (1987). The anatomy of mass literacy in nineteenth-century United States. In R.F. Arnove & H.J. Graff (Eds.), *National literacy campaigns: Historical and comparative perspectives* (pp. 99-122). New York: Plenum.
- Strauss, G. (1978). *Luther's house of learning: Indoctrination of the young in the German reformation*. Baltimore: Johns Hopkins University Press.
- Thomas, A. (1983). *Adult illiteracy in Canada—A challenge* (Occasional Paper No. 42). Ottawa: Canadian Commission for UNESCO.
- Unsicker, J. (1987). Tanzania's literacy campaign in historical-structural perspective. In R.F. Arnove & H.J. Graff (Eds.), *National literacy campaigns: Historical and comparative perspectives* (pp. 173-196). New York: Plenum.

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Literacy in Canada: A Critique of the Southam Report

Literacy in Canada: A Research Report (1987), a study by Southam News, indicates that the rate of adult illiteracy in Canada is a conservative 24%. A companion document, Broken Words (Calamai, 1988), contains a series of articles which sensationalize the impact on Canadians of this illiteracy problem. The author argues that intelligent use of the data in these documents requires an understanding of the manner in which (il)literacy was measured and of the problems involved in their interpretation. Some implications arising from the uncritical acceptance of these data are cited.

A major study on adult literacy in Canada by Southam News, at a cost of \$295,000, was released in 1987 and indicated that the illiteracy rate was 24%—higher than in many other countries including Third World countries. Three documents and one set of tapes emanated from this study and can be purchased for a total of \$602.00. The two most widely distributed documents are *Literacy in Canada: A Research Report* and *Broken Words* (Calamai, 1988). The purpose of the research report is to make accessible to the public selected research findings. *Broken Words* consists of articles that previously appeared in newspapers; its purpose appears to be an attempt to reach the general public in terms of more personal and sometimes sensational language regarding the state of adult literacy in Canada. Because of their impact on public awareness of adult literacy in Canada, it seems timely to offer a critique of them.

Measuring Literacy

The authors of the *Literacy in Canada* report state that “policy makers have to determine on a very practical level the degree of literacy required by its members to function” (p. 5). In order to determine an appropriate *degree of literacy*, the authors of the study borrowed test items from a United States study (The National Assessment of Educational Progress for Adults [NAEP], Kirsch & Jungeblut, 1986).

Fifty items were chosen from three of the NAEP scales—prose, document, and quantitative. No criteria are given as to why 50 were chosen, why *these* 50 were chosen, why unequal numbers were chosen from different scales (32 were chosen from the document scale versus 9 from the other two), or what proportion of the items from each scale was chosen. One of the reasons offered for using items from the NAEP scales was “the availability of grade-level equivalents, established for the NAEP reading

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proficiency scales" (p. 8),¹ but no grade equivalents are provided in the *Literacy in Canada* report. A section of the Canadian Charter of Rights with two questions was appended to the borrowed items but once again without a rationale. The results of this item are given minimal attention in the report. Two test versions were constructed, each containing a common base of seven items from the reading proficiency scales of the NAEP study administered to an in-school sample. The criterion given for selecting these items was that "none were chosen to be particularly difficult." The validity of that judgment is not addressed. The authors say that the items were distributed across the two versions "so that the two were matched as much as possible, in terms of difficulty and general content area within each of the literacy scales" (p. 14). Yet results showed that performance on both versions was substantially different. An additional seven core items were used to "screen" subjects who would not take the whole test. These core items were considered "relatively simple items" on page 13, but on page 198 the authors indicate that "The items in the core were mostly quite basic with the exception of the two reading items." One may conclude that there were a number of sources of random error in devising the test instrument.

To determine a criterion for functional literacy, the authors presented 24 Canadians and one adult literacy class, which counted as one vote, with 66 items (50 from the prose, document, and quantitative scales; nine from the reading proficiency scale; and seven from the core). The members of this jury were to complete the items and "indicate for each item whether or not that item should be answered for a person to be functionally literate." These 25 people (none from Newfoundland, Prince Edward Island, or Manitoba), who mainly held professional or executive jobs, decided what *all* Canadians needed to be able to read in order to be classed as literate. Thus, while the ability to set up a meeting may have no pertinence for fisherfolk in rural Newfoundland, those persons were expected to answer correctly four questions on this middle-class value-laden activity. If they should get more than two of these four items wrong (even though all other items on the scale were correct), they would be classed as illiterate. The literacy tasks in many or most cases did not make "functional" sense. In fact, Kazemek (1983) would question whether it was ethical and moral for a group of individuals with middle-class values to determine what it means for all Canadians to be literate.

There was considerable disagreement by the jury regarding which items should be chosen, from a low of eight to a high of 37 (which the Report indicates was out of 38). To resolve this dilemma the *Literacy in Canada* authors decided to choose those 20 items on which there was 80% agreement. However, the study sample was not tested on all those 20 items; the items were allocated to two versions of the test, with 10 in version 1 and 14 in version 2 (four were common to each version). A standard or criterion of functional literacy was set which consisted of "answering a minimum of 80% of these items correctly."

The criterion of answering 80% of the items correctly represents a fine demarcation point separating literates from illiterates. For example, the 9%

who scored 8 out of 10 on version 1 were classed as literate while the 4% who scored 7 out of 10 were declared illiterate despite the NAEP authors' caution that "it is a somewhat inferential risky leap" that a percentage of a certain group scoring below a particular level cannot comprehend that item (Mikulecky, 1986, p. 215). Fisher (1978) had noted that college graduates had made some basic errors on items that were well within their capability, either due to their growing weary of completing the items or because the items were not part of a *meaningful functional reading situation*. This must be kept in mind when evaluating the finding that 8% of the university graduates (approximately 24) scored in the functional illiteracy category.

Interpreting the Data

The authors of the NAEP study had rejected any notion of labelling adults on the basis of particular cut-off points. Instead they assessed the literacy abilities of adults on three scales: prose comprehension (reading and responding to continuous text), document use (forms, tables, charts, etc.), and quantitative (reading that involves calculations). Performance was allocated to one of five levels: rudimentary, basic, intermediate, adept, and advanced. Why the NAEP authors decided not to categorize performance in terms of literate/illiterate is not known, but it may have been due to criticism of the Adult Performance Level Project (APL) commissioned earlier by the United States Office of Education to establish standards of functional competency based on level of education, level of income, and status of job (Northcutt, 1975). One of the criticisms of the APL project was the assumption that if an individual *could* read a particular item, that individual *would* and *did* read it as part of his or her existence. A second major criticism was that a definition or a national standard of functional literacy was not possible, for this would assume that all people in all parts of the country encountered the same needs and met them in the same way. The disagreement by the jury on which items should be chosen to measure literacy reflects the difficulty in choosing a national standard. Kazemek (1983) asserted that "there exists no empirical criterion for establishing standards of functional literacy for society as a whole" (p. 74). The authors of the *Literacy in Canada* report, in devising their functional literacy measure, fell into the same traps as the APL project. The only relativity the authors acknowledged was between an agricultural society, an industrial society, and a postindustrial society. Because Canada was a postindustrial society it was assumed that homogeneity existed from coast to coast.

While the *Literacy in Canada* authors indicated that one of their reasons for borrowing items from the NAEP scales was the availability of grade level equivalents, they rejected a grade level for interpreting their data. Reasons given for this included the difficulty of relating a grade level meaningfully across geographic areas and of relating its validity in determining a person's ability to *function* in society. Yet these same criticisms are inherent in the criterion they actually used. Even more confusing is the fact that the overall illiteracy rate for Canada did not represent actual performance. Of those who answered the items on version 1, 28% were classed as illiterate, while 20% of those who took version 2 were so classified. Not only do these

results cast doubt on the equivalence of the two versions, but they also point out the variability of the pertinence of particular items. However, rather than deal with the results as limitations, the authors decided merely to average the percentages (consisting of different items and administered to different groups) and thereby arrive at an illiteracy rate for Canada of 24%. They claimed that it was now possible "to take clusters of individuals operating at specific levels of functional literacy and describe their relevant characteristics" (p. 20), one of which according to Calamai (1988) is "darkness and hopelessness" (p. 7).

Among the various comparisons reported were those between groups of Canadians 21-25 years of age and an American group in the same age range that had been administered the NAEP scales. The data indicate that the Canadian sample is slightly behind its American counterparts. The authors indicate that in making such a comparison there

is the need to code oral answers to several questions as correct or incorrect. We again obtained the assistance of the NAEP researchers in this matter, and discussed with them the nuances of the coding categories used. There is no guarantee that our use of the coding categories was the same as theirs. (p. 199)

There is also no guarantee that the use of the coding categories was the same across any two coders. No inter-rater reliability data are provided, nor are the coding categories given.

Irrelevancy/Extremism of Information

Broken Words (Calamai, 1988) contains many examples of irrelevant and extreme statements. For example, it is observed that

In 1861, the census of Upper and Lower Canada asked residents to mark a space if anyone in the household was unable to read or write. By that definition scholars now estimate 10 percent of Hamilton's population was illiterate, many of them *Irish Catholic* immigrants. (p. 4)

Is it relevant that the immigrants were Irish Catholic?

In discussing the high illiteracy rate in Newfoundland, an interview with a respondent is quoted, "I can read; I'm not stund," he says, using the Newfoundland contraction for stunned, meaning stupid" (p. 20). How can anyone tell a spelling from a spoken word (unless Calamai pronounces *stunned* as *stunn-ed*)?

In discussing the changing role of Frontier College, the author claims, "the College can more easily raise money to help high school drop outs and factory workers, than for Newfies, East Indians, or natives" (p. 35). To what extent has Frontier College played a significant role in the lives of Newfoundlanders, East Indians, and Natives? Furthermore, it seems that the author does not possess the appropriate cultural knowledge to know that *Newfies* was a condescending term coined by the Americans during the days of American air and naval bases in Newfoundland, and while becoming more generally accepted for use among Newfoundlanders, it is still largely resented when used by "outsiders."

The use of hyperbole is illustrated by statements such as "Conferences of the erudite International Reading Association degenerate into brawls when

academics champion their favored definition [of adult literacy]" (p. 14). The author of this article has been a member of the International Reading Association for approximately 20 years and at one time served as Chairperson of the Canadian Membership and Organization Committee. Memories of conferences are of orderly gatherings without any fanfare. Furthermore, only in the last few years has the International Reading Association begun to address adult literacy. Another example of extremism in language is "Like warring religious factions, the groups [exemplifying various philosophies of adult literacy] assail one another's doctrine, dogma, and paternity. Often the illiterates seeking help appear to be sacrificed to the ideological battle" (p. 43). The fact that a coalition of various national literacy groups (Movement for Canadian Literacy, Laubach Literacy of Canada, Canadian Association for Adult Education) exists would suggest that there is more likely to be peace among such diverse groups than war.

Images of Illiteracy

Regardless of the question of validity and reliability of the data in the Southam Reports, it is likely that both have and will continue to have considerable impact on the Canadian public. Two images in particular have been promoted by the reports: the image of Canada as an illiterate nation, and the image of the adult illiterate.

With an illiteracy rate of 24% which the *Literacy in Canada* report states is a conservative figure, Canada ranks behind many countries, including Third World countries, in terms of a literate population. This is especially disturbing when one considers the overall economic and social standards of Canada and the political influence which Canada exerts in world affairs. Perhaps even more disturbing is the claim that the image of Canada as an illiterate nation will persist because "100,000 illiterates a year are being added to the Canadian population by a flawed education system and humanitarian immigration policies" (Calamai, 1988, p. 8).

Even more striking is the image of the Canadian illiterate. Quotations in *Broken Words* from literacy learners and educators help portray what it means to be illiterate: "It's having documents shoved in front of you and being told to sign and not worry about what it says." "It's something like being an alcoholic." "No one knows the anger that people who can't read go through ... You're left in the dark." "Being illiterate is like trying to pick something up with both hands tied behind your back." One learner said, "We're living in a different world than people who can read." How different is that world? Perhaps it depends on whether that world is viewed as a half-empty glass or a glass half full! For example, 75% of the illiterates identified in the study did not feel that their reading skills (or lack thereof) were holding them back. Out of 16 areas (Table 92, *Literacy in Canada*) where lack of reading skills could be a problem, the illiterates and the literates differed substantially in only three areas; the illiterates felt held back in one, and the literates felt held back in two. Illiterates as a group did not appear to be deprived of involvement in current events. Fifty-two percent said they read a daily newspaper, and 49% of the functional illiterates followed govern-

ment and public affairs; this compares to 51% for the fuller literates. It is granted that there were more illiterates out of work and with lower paying jobs. But as Townson, the Ottawa economist (Calamai, 1988) pointed out, while one half of Ontario's welfare recipients are illiterate, they are not necessarily on welfare because they are illiterate. Also, the corollary of this statement must not be forgotten: Half of Ontario's welfare recipients are literate. Thus forces other than illiteracy must be operative. The generalization that adult illiterates are "lost souls" borders on being immoral. The significance of regionalism, relativism, and individualism seems to have been ignored. As Kazemek (1983) declared, "All people do not face the same real-world problems; therefore establishing a set of objectives which presumably all 'successful' people must meet is inappropriate. There are many ways of solving problems in life" (p. 77). Not only do many Canadians find out through many sources when a bus is leaving, but for many the problem of bus schedules does not exist. And as Darville (Calamai, 1988) and Fingeret (1983) point out, many people live complete and satisfying lives without bus schedules and even without literacy.

Implications

The Southam Report data have influenced provincial groups in their application for federal funds now being made available. In the October 1986 throne speech, the Federal Government committed itself to action on adult literacy including funding through the National Literacy Secretariat. One of the possible dangers of combining the Southam data with the present Federal Government initiatives is that there will be attempts at provincial mass campaigns, a search for all the illiterates identified in the Southam Report. Just as the suggestion (Calamai, 1988) that Michael J. Fox posters be placed *on every bus* in Canada to promote interest in literacy ignores the fact that for many Canadians buses are not part of their lives, so too an attempt to "round-up" all illiterates ignores the fact that many of these individuals are leading satisfying and productive lives (Goodyear, 1987). Furthermore, for many whose "literacy status" might be changed, nothing else in their lives will likely change.

It would seem to make more sense to try and accommodate the one tenth that is now enrolled or would like to enroll in a literacy program (*Literacy in Canada*). Data show that several literacy programs cannot accommodate the number of adults requesting admission, and waiting lists get longer (Edmonton Association for Continuing Education and Recreation, 1988).

Once a target population has been reached, it is important that it be provided with meaningful literacy programs. The present dropout rate is 50% (Calamai, 1988). Fingeret (1984) warns: "Applying national standards to a relative concept can detract from efforts to mould adult literacy programs to fit the specific goals of adults in varying contexts" (p. 9). The significance of Fingeret's statement is best appreciated if one considers the *logical* program implications of the Southam research data. Literacy programs would be organized across the country in which individuals would be subjected to prose comprehension, document use, and computation in

reading materials (those skills that make an adult literate). They would answer questions about swimmers in the Georgia Strait, abstract themes from Emily Dickinson's poems, interpret bus schedules, look up the headings for microcomputers in the Yellow Pages, take phone messages, organize meetings, write cheques, and calculate prices and tips for lunch menus, regardless of whether these skills have any meaning in their daily lives. Therefore, one must be careful of basing programs on the Southam definition of literacy as a determiner of content. As Langer (1988) states,

Research in a variety of fields has demonstrated that literacy is inextricably bound with economic, political, and religious issues and that societies (or groups within societies) become literate when the individual's or group's motivation to use literacy for some meaningful purpose intersects with society's willingness to facilitate related instruction. (p. 42)

Calamai's *Broken Words* (1988) provides a brief description of 19 literacy programs. An analysis of the information provided indicates several characteristics of programs: organizational structure, delivery systems, content, accessibility, nature of participants, interpersonal relations, and professional development. Not in a single instance is the nature of the reading and writing methodology addressed. There is no doubt that all of the mentioned characteristics are important in devising programs, but the crux of developing literacy skills involves acquiring competence in reading and writing. Unlike the situation in Third World countries, most illiterate Canadians have attended school. They are not encountering written language for the first time; many have tried before and failed. Due to maturation and different perspectives of literacy in their present lives, some may now be in a better position to develop literacy skills, but there are many who are beset with the same kinds of learning problems that they experienced in school. Furthermore, many of them are saddled with an albatross of irrelevant and misleading literacy concepts which must be considered and changed (often circuitously, [O'Brien, 1987]) if these adults are to succeed (Fagan, 1988).

While literacy programs ought to consider individual needs and help raise the consciousness of the participants to the issues within their lives, they must not kindle false hopes. The adult who looked for literacy because without it "the world will not see the peace and love that I dream" (Calamai, 1988) is dreaming under false illusions. Ironically, the world leaders who possess the power for peace or war are *literate*. Literacy must be viewed within a theory of relativity, not within a theory of utopianism.

The literacy educator has a grave responsibility and must possess a number of skills and characteristics. The dispute between the use of volunteers versus paid teachers is not really about volunteer versus salaried individuals. It is about expertise. When Serge Wagner (Calamai, 1988) makes the point that bureaucrats would not be content to have volunteers educate their children, the significant point he wishes to make is that these bureaucrats would want well-qualified individuals who have a long-term commitment and investment in educating their children. No doubt some volunteers are more competent and committed than some paid teachers and

vice versa. The nature of the necessary expertise for adult literacy educators (volunteer or paid) needs to be critically examined. The fact that volunteers "are almost quivering with anticipation" is not enough.

Conclusion

Many aspects of the Southam documents are open to question. But there is no denying that there are adults in Canada who have need for meaningful programs to upgrade their literacy skills. Literacy, however, must be defined in terms of the circumstances (economic, social, geographic, etc.) of the people involved and their needs, whether immediate or long term. A single, simple definition of literacy will not suffice. Also, there is no place for sensationalism in attempting to address an issue that varies so considerably in its significance for different groups and individuals within the Canadian population.

Note

1. Unless otherwise indicated, quotations are from the *Literacy in Canada* report.

References

- Calamai, P. (1988). *Broken words*. Ottawa: Southam Communications.
- Edmonton Association for Continuing Education and Recreation. (1988, February). Meeting of the Literacy Sub-committee, Edmonton.
- Fagan, W.T. (1988). *Concepts of reading and writing; Dependency relationships*. Unpublished paper. University of Alberta, Edmonton.
- Fingeret, A. (1983). Social network: A new perspective on independent and illiterate adults. *Adult Education Quarterly*, 33, 133-146.
- Fingeret, A. (1984). *Adult literacy education: Current and future directions*. Columbus, OH: ERIC Clearinghouse on Adult, Career and Vocational Education, Ohio State University.
- Fisher, D.L. (1978). *Functional literacy and the schools*. Washington, DC: National Institute of Education.
- Goodyear, C. (1987, November 19). *The Evening Telegram*, St. John's, p. A1.
- Kazemek, F.E. (1983). *Toward a theoretical framework of adult literacy*. Unpublished doctoral dissertation. Southern Illinois University, Carbondale.
- Kirsch, I., & Jungeblut, A. (1986). *Literacy: Profiles of America's young adults* (Report No. 16-PL-02). Princeton, NJ: National Assessment of Education Progress.
- Langer, J.A. (1988). The state of research on literacy. *Educational Researcher*, 17, 42-46.
- Literacy in Canada: A research report*. (1987). Ottawa: Southam Communications.
- Mikulecky, L. (1986). The status of literacy in our society. In J.E. Readance & R.S. Baldwin (Eds.), *Research in literacy: Merging perspectives* (pp. 211-235). Rochester, NY: The National Reading Conference.
- Northcutt, N. (1975). *Adult functional competency: A summary*. Austin, TX: University of Texas.
- O'Brien, M.A. (1987, May). *The demonstrations of programs, teachers, and students: Lessons from an adult illiterate*. Paper presented at the Canadian Council of Teachers of English Conference, Winnipeg.

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Adult Education, Economy, and State in Canada

Educational activities undertaken by Canadian adults are varied in scope and extensive in magnitude. But links between adult education and the changing social structural context—especially the state, labor markets and labor force, occupational structure and labor process, or the economy more generally—remain largely unexamined within an explicit theoretical framework. This article explores some of these links within a political economy framework and examines the implications for adult education of the changes in the Canadian economy and politics during the post World War II period, especially those which began in the mid-1970s.

Educational activities undertaken by Canadian adults 17 years and over on a part-time basis are varied in scope and extensive in magnitude. A recent national survey of participation in adult education undertaken for the Secretary of State revealed that one in every five Canadians enrolled in at least one adult education course in 1983 (Devereaux, 1984). Another recent study notes that participation in adult education has burgeoned dramatically since the mid-1970s and is expected to continue expanding (Buckland, 1985, p. 139). The opportunity for access to education through adult education and part-time study as a possible second chance for disadvantaged groups and as a vehicle for continuous upgrading and skill improvement has also received attention. (Adams, Draper, & Ducharme, 1979; National Advisory Panel on Skill Development Leave, 1984; Task Force on Skill Development Leave, 1983). However, the research on this question is as yet not extensive. Although the available studies on participation patterns and accessibility draw attention to some possible links between adult education and the social structural context, specifically class and gender inequalities (Canadian Association of Adult Education, 1982), there are few that add much to our understanding of the links between it and the state, job and labor markets, labor force and labor process, or economy more generally (Rubenson, 1987). Limits of our understanding in this respect have led one leading Canadian adult educator to concede that "adult education has remained a hidden dimension of Canadian social, economic, cultural, and political life" (Cassidy, 1987, p. 2).

This article explores some of these links within a political economy framework and examines the implications for adult education of the changes in Canadian politics and economy during the postwar period, especially those which began in the mid-1970s.

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Toward a Political Economy Perspective

Political economy is the study of power in society derived from or contingent on a system of private property rights, the historical development of power relations, and the social and cultural embodiments of such relationships (Marchak, 1985). Its starting premise is that we can come to know a society's key structures and diverse and specific social practices by examining the way in which the members of that society produce and reproduce the conditions of their existence (Clement, 1983, p. 377; Wotherspoon, 1987, p. 3). In the political economy perspective, schooling in contemporary societies is treated as a distinct institutional complex with its own diverse and distinct social practices and purposes, but one that is shaped by the power relations between different economic, political, and social groups. Because power relations among groups are expressed in increasingly important ways through a society's political structures, more specifically the state, any political economy analysis of the educational system must be based on some implicit or explicit analysis or theory of the purposes or functioning of the state (Carnoy, 1985; Wotherspoon, 1987). In other words, what is needed for a political-economic analysis of education in advanced capitalist societies such as Canada is a focus on the role of the state in the development and deployment of social policy in addressing contradictions endemic to their social and economic development.

The state, or more precisely the liberal democratic state, refers to a complex of institutions such as the government including the bureaucracy, the military, the judiciary, and representative assemblies including provincial and municipal institutions of government (Panitch, 1977, pp. 6-7). Following O'Connor (1973), the state must try to perform two basic but often contradictory functions: (a) to foster capital accumulation and (b) to foster social harmony and consensus. These so-called "functions" refer to what are merely tendencies at work within the capitalist state (Gough, 1979, p. 50). Whether the state meets these requirements, and the manner and the extent to which it does so, is not preordained in the state structure alone. However, in those countries which now comprise the advanced capitalist world, the role of the liberal state has mushroomed, and accumulation and legitimation related activities account for much of this growth. The liberal democratic state with a vastly expanded role in national capitalist economic and social policy development has emerged as a central institution during the post Great Depression era and is now commonly referred to as the "welfare state." Two important factors largely explain the growth of the welfare state: (a) the degree of class conflict, in particular, the strength and form of working-class struggle; and (b) the ability of the capitalist state to formulate and implement policies to secure the long-term reproduction of capitalist social relations (Gough, 1979, p. 64).

In the postwar expansionary era of advanced capitalism which culminated in the early 1970s, the welfare state policies expanded massively by attending in a more or less balanced way to the requirements of both capital accumulation and legitimation. However, the economic slump that developed thereafter pushed the capitalist state toward a radical revision of

its social policies and caused it to embark on a strategy of fiscal restraint. Imposition of restraint policies signalled the beginning of a drawn-out process of wide-ranging restructuring of capitalist societies including the welfare state which has continued to unfold during the 1980s (Gough, 1979; Ismael, 1987; Panitch, 1987).

Accumulation Crisis and Welfare State Policies

There is extensive evidence that capitalist societies have, since the early 1960s, been going through a period of prolonged crisis in their mechanisms of capital accumulation.¹ Educational developments of the last 40 years as well as the ones currently underway (Decore & Pannu, 1986; Livingstone, 1987b; Schechter, 1987), whether they have directly grown out of the actions of the state or emerged as indirect consequences of its economic strategy, constitute an important subset of a large and complex ensemble of carefully devised responses of the Canadian state to the postwar thrust of its economic development policies and, more recently, to the economic crisis which began to surface in Canada around 1970 (Wolfe, 1984, pp. 63-70). In this respect it should be noted that associated with the postwar expansionary economy of Canada, as of other advanced capitalist countries, was a commitment to high and stable levels of employment, generally viewed as a commitment to full employment. In Canada this commitment was less firm than in some other countries (Therborn, 1986, p. 113). Nonetheless, until 1975 the federal government did use fiscal and monetary policies as a means of demand management to maintain relatively low levels of unemployment. Thereafter, the Keynesian social and economic policy framework within which this commitment was rooted was abandoned (Wolfe, 1984).

This marked a significant shift in the Canadian government's economic and social development strategy. In its wake a much higher priority was placed on controlling inflation than on maintaining full employment. Related to the use of fiscal and monetary policies to combat inflation was the government's announcement that the growth of government expenditures would be held to a rate less than the growth of the GNP (Wolfe, 1984). The progressive implementation of the government's deliberate resolve to combat inflation relying on a comprehensive post-Keynesian policy so combined with the deepening recession in the global capitalist economy as to produce economic depression and rising unemployment from the late 1970s.

The shift from Keynesianism to monetary gradualism in 1975 signalled the end of the post-war era in Canadian economic policy and the abrogation of the post-war political compromise. The delicate balance that the post-war compromise attempted to strike between the economic interests of capital and wage and salary earners was replaced by a one-sided preoccupation with the concerns of business and the requirements of capital accumulation. With the demise of the Keynesian era and the onslaught of the new depression, the fundamental distributional issues that lie at the heart of a capitalist economy are once again at the forefront of political debate (p. 76).

In Canada the passing of the Keynesian era has been succeeded by renewed struggles between capital and labor. In the mediation of these struggles the state must act as an apparently neutral player and yet not

abandon its agenda to restructure itself as well as the economy. Foremost among these changes is the restructuring of work which, in turn, is producing changes in processes of production and production technologies, job definitions and requirements, relations of power and control in the workplace, labor markets, and polarization in the distribution of skill within the occupational structure (Panitch, 1987).

The development of adult education in Canada has been, and will continue to be, strongly influenced by the political economy of the country. Moreover, the implications of an emerging "new" political economic context for this educational sector are probably best understood when they are examined in relation to past developments.

Adult Education in Transition

Prior to the Second World War, adult education in Canada had the character of a more or less radical social movement. Its primary goal in the 1930s was to mobilize the poor and the unemployed—the victims of the Great Depression—in collective self-defense and for radical transformation of the Canadian society. Speaking of the social and ideological commitments of the popular adult education movement, Welton (1987a) writes:

When the Canadian adult education community achieved corporate identity in the Depression and War years, the welfare state had not yet emerged. Identifying the "central problem" of their time as economic and political powerlessness and animated by a vision of participatory democracy, adult educators sought to mobilize people at the grass roots to reflect collectively on their situation and devise solutions to their problems. The educational radicals of the 1930s and 1940s rejected liberal, individualistic educational ideals. Educators, they believed, had to take a stand on the fundamental issues of the day. Educational forms and purposes were tied to social and political purposes. Commitment to a democratic society demanded participatory pedagogy. The small group was universally regarded as the cell of the emergent new social order. (p. 29)

However, with the emergence of the welfare state in the mid-1940s, adult education was gradually incorporated into state social policies, particularly those related to education and job training. This has led to far-reaching changes in the general scope and character of what today passes for adult education. Its radical commitment to seek social transformation in order to attain a just and emancipatory democratic social order through popular adult education has disappeared. Today, continues Welton (1987a),

Canadian adult education, with notable exceptions, is professionalized, becalmed, and technicized. Many of us are captive to ideologies of the individual learner. We lack a coherent understanding of the social purpose of adult education. We are fragmented along institutional lines. We see ourselves as professionals marketing programs and not as activists mobilizing people through dialogue. Consequently, we are in a weak position to understand what role adult education can, and must, play in the resolution of our "structural binds." (pp. 29-30)

This important shift in the purposes and emphasis of adult education from social emancipation to personal development and self-improvement, insightfully noted and passionately lamented by Welton, inextricably linked as it is to the profound and irreversible structural transformations that have taken place in Canada in the postwar period and which are discussed

later, warrants some elaboration. The earlier radical mobilizational phase was clearly rooted in social movements which principally developed in two of Canada's economically peripheralized regions, the Maritimes and the Prairies. These movements were largely the responses of independent petty commodity producers to their subjection to a particular mode of economic exploitation of capitalist underdevelopment whereby the surplus value of their labor was appropriated by capital through the cost-price mechanism of unequal exchange (Sacouman, 1979, pp. 37-58). Thus adult education as a more or less politically oriented movement was regionally localized and largely located outside the state system of education and, needless to say, outside the state social policy framework. Eventually, the material and social conditions that spawned it lost their salience during World War II and in the context of major social-structural changes that followed. These changes included the general expansion of the Canadian state and its centrality in future social and economic development, the expansion of the Canadian economy and the concomitant consolidation of corporate capitalism, the declining significance of individual production based on domestic mode of production and exchange, and the massive expansion of the educational system.

The resulting structural and ideological conditions were inimical to the continuation of the very social movements and politics of protest in which the radical adult education had its origins. Although destructive of these phenomena, they permitted the newly emerged Canadian welfare state to redefine itself as an essentially transpolitical and technocratic entity. In such a nonpartisan role, "the state is severed from the visible class dimensions of political strife and debate. [It] ... administers, in fact, a social reality in which all interests can be reconciled by the magic of science applied to the limitless expansion of output" (Larson, 1977, p. 144). The political significance of the state's ability to appear nonpartisan lies in its enhanced capacity to inhibit the growth, if not the emergence, of class-oriented politics in the organized political party system. Such a state tends to develop a symbiotic and organic interdependence with the "scientific expert" and the "professional administrator" and, as a corollary, with the education system's institutional complex, especially universities. The significance of the modern university arises from its being the locus for the institutionalized production of professionals and the meritocratic legitimations which underwrite their power and public credibility. Such conditions in postwar Canada, as in other advanced capitalist societies, provided the initial impetus for and sustained the growth of "depoliticized" adult education.

The material conditions that underlay the reforms in postwar Canadian education were also responsible for the growth of adult education. The maturing of corporate capitalism in Canada during the period under study resulted in the growth of the tertiary sector, the growth of the professional and semiprofessional salariat, an increase in the white-collar proletariat, and the integration of significantly more female workers into the labor force. These developments led to the growing need to prepare recruits for positions in the bureaucratized corporate and state sectors, especially the new

stratum of salaried technicians and semiprofessionals. The growth of the community colleges in which a significant bulk of the rapidly growing adult education services and programs became located reflected the need to produce such workers.

Accordingly, it is the "professionalized" version of adult education (Welton, 1987a, p. 12) that "came of age" in Canada and experienced an exceptional expansion in the postwar period (Campbell, 1980; Clarke & Brundage, 1982, pp. 207-241; Selman & Kulich, 1980). Its growth has been driven by the same structural and ideological transformations that brought about the substantial expansion of the state, the occupational class structure, and the entire educational system. These transformations include the perceived need for skilled manpower premised on ever-increasing requirements for more advanced technical and productive skills of an expanding economy; the pressing concern of the "neutral" state for rationalization, not necessarily reduction, of structured inequalities of advanced capitalism; and the increased popular demand for expanded access to education because of the progressively tightening link of educational credentials and the labor market, coupled with the central importance of wage labor as the major means of currently earning a livelihood.

The relevance of the latter factor—education and labor market linkage—is often overlooked. Wage labor system and labor markets in advanced capitalism, quite unlike those in less developed capitalist social formations, do not stand apart; they are both irrevocably tied to the world of work. It is the wage labor system that mediates the education system-labor market linkage and tightly binds the former to the latter (Lenhardt, 1981). Adult education, especially the segment which derives its preeminent purpose of training and retraining of adults in productive skills and involvement in vocational renewal and upgrading—as embodied in its activities mandated by the state that revealed the influence of liberal theories of industrialism and human capital—is more directly vulnerable and indeed more receptive to the logic of change inherent in labor markets than are other realms of the educational system. Thus its own institutional culture—overlaid with Progressivism's idealist commitment to individual self-development as well as the noticeable influence of the ahistorical and decontextualized and, therefore, ideological notion of the "self" and its "needs-driven" development as derived from "humanistic" psychology (Welton, 1987b, pp. 52-57)—tends to make it a largely uncritical and unreflective agency for the social reproduction of labor for the rapidly changing labor markets of an increasingly "capital-centered" (rather than a "person-centered") postindustrial society.

In sum, adult education in Canada during the last 50 years has been shaped by major changes in the social structure of the country. The structural changes were expanded role and changed character of the state; the massive growth in the size of the industrial and business corporation and of the workplace, along with their bureaucratization; the rise to new prominence of the service sectors of the economy; and the massive expansion of the entire educational system. Concurrently, there have been

dramatic shifts in the composition of the Canadian labor force and the structure of the labor markets (Kaliski, 1985; Marchak, 1985, pp. 688-691; Riddell, 1985; Rinehart, 1987). These developments mirror the advance of corporate capitalism in Canada and, as female employment grew, affected gender, class, and perhaps ethnic relations (Cross & Kealey, 1984, p. 79). This is the context in which the analysis and a critique of postwar developments in adult education must be situated.

In the first 20 years after World War II, the Canadian economy and the markets for labor grew rapidly and so did the educational system both in size and diversity. Although formal educational institutions in Canada were concerned principally with the education of children and youth, most began to extend their function to include educational activities for adults in accordance with the trend toward vocationalization. But the phenomenal growth of the nonuniversity postsecondary educational sector during the 1960s was probably the most important institutional factor in the growth of adult education. Because of their special focus on vocational and career education and training, these institutions stressed accessibility through provision for part-time study. In so doing, they became a dominant and different type of agency engaged in adult education provision and served as state-funded loci for its consolidation and expansion.

The expansion of adult education during this period was an integral part of the extensive vocationalization of Canadian education critically analyzed by Schechter (1977) in his seminal essay "Capitalism, Class, and Educational Reform in Canada." Some of the more significant changes in education which took place in the 1960s were the establishment of progressive education as the dominant doctrine and educational practices associated with it; the consolidation of school boards and the development of composite high schools with the expansion of vocational education; the expansion of postsecondary education, especially at the nonuniversity level; and rationalization of the educational sector under provincial jurisdiction and control (Schechter, 1977).

Not surprisingly, the main beneficiaries of the expansion of adult education appear to have been those who already enjoyed advantages of favorable education, income, and class position (Dickinson & Verner, 1977, p. 87)². Nevertheless, this expansion as a complement of educational expansion at all levels also enabled the state and the reformers in general to claim that they and the educational system were delivering on their promise of democratization and equalization of opportunity. In this way, it has played an important role in promoting meritocratic legitimation of the structure of inequalities characteristic of corporate capitalism.

State sponsorship and incorporation of adult education into social policy signalled a significant shift in the development of adult education. Federal government presence, although indirect, looms large in shaping this learning system. Adult education, as a consequence, has become closely integrated with "specific development needs relating to regional disparities, industrial development, poverty, unemployment and bilingual and cultural diversity" (Clark & Brundage, 1982, p. 208). This is not to suggest,

however, that adult education is principally the creature of federal government policy imperatives. In the postwar era, the Canadian state at the provincial level also became increasingly involved in economic development and therefore in the capital accumulation function. Consequently, it too has contributed actively to the growth of adult education in order to produce the requisite labor force. Governments began operating most of their employment-training programs through community colleges or similar institutions. The federal government, under the provisions of the Adult Occupational Training Act (AOTA) of 1966 developed the Canada Manpower Training Program (CMPT) and used it to provide employment training through the community colleges, thereby boosting the expansion of adult education directly until the end of 1974. Funds used for that program were at that point placed in the hands of provincial governments, thus enlarging their role in this aspect of adult education.

While up to the mid-1970s personal development/general interest related learning opportunities were readily available alongside the vocationally oriented ones, the former began to be curtailed, or in some instances withdrawn, under the growing impact of government funding cutbacks in the late 1970s (Pitman, 1987; Thomas, 1987). In the context of the deepened accumulation crisis since the early 1980s, as the state in Canada continues to engage in a broad-based strategy of restructuring the political economy and makes a transition from its policies emphasizing "income security" to those emphasizing "job creation" (Ismael, 1987), adult education is expected increasingly to become even more vocational in orientation. Gough (1979) has suggested that education can be adjusted to adapt the labor force and potential labor force more effectively to the needs of the labor market and expects the current crisis to strengthen the hands of the "industrial trainers." What are the main features of the labor markets and how might they affect adult education as capitalism negotiates its way through the current crisis to the next century?

Changing Occupational Structures and Labor Markets

Changes in Canada's labor force reflect important developments in the evolving "post-industrial" economy (Drache & Cameron, 1985, pp. 136-145). One of the most significant social trends has been the continuing increase in the labor force participation. Between 1966 and 1985, the participation rate for women has risen from 35.4% to 54.3% (Canadian Social Trends, 1986). In 1981 close to 10 million Canadians were employed for wages and salaries—6.8 million in services and 3.1 million in goods-producing industries. Of the former, 49% were women; of the latter 77% were men. Between 1961 and 1981, the labor force increased by 5,358,000. Of this number, 3,450,000 were women. Women now make up over 41% of the labor force and have accounted for 57% of the increase since 1961. They work mainly in the service industries and in a much narrower range of low-wage, low-status occupations than men.

Closely associated with the increase in the labor force participation rate of women has been the much more rapid growth in service-based industries compared with the goods-producing sector of the economy (Canadian Social

Trends, 1986). Total employment in the service sector grew by 61% between 1970 and 1985 as compared with only 13% growth in the goods-producing sector. In 1985 the service industries' share stood at about 70% of all jobs in Canada—an all-time high. This shift in sectoral employment has been most pronounced in the 1980s.

The differential in the growth of the goods-producing versus service industries has several implications for the labor market as the two sectors are quite different in the type of employment associated with each. The differences in employment are: (a) a higher proportion of women are employed in the service sector (50.5% compared with 23.4% in the goods-producing sector in 1985); (b) the service sector has a higher proportion of part-time employment (19.5% compared with 6.1% for the goods-producing sector); (c) average weekly earnings are much lower in the service sector; and (d) goods-producing industries have a higher unemployment rate. (Between 1961 and 1981 the number of service workers including state employees increased by 3,911,000. Of this number, 2,430,000 were women. Four out of five of the women who have entered the labor force since 1961 have been service workers. Total increase in the number of office and clerical workers between 1961 and 1981 was 1,227,000. Of this number 1,110,000 were women and the majority, though not all, were employed in service industries.)

Another significant development in the labor market situation is the sizable growth in part-time employment. Between 1975 and 1985 total part-time employment in Canada increased by 78%, from 988,000 to 1,757,000, and part-time workers, as a proportion of the employed work force, increased from 11% in 1975 to 16% in 1985. Part-time work is now largely the preserve of women. In 1985, 72% of all part-time employees were women, and 26% of all employed women worked part time, compared with just 8% of men. Part-time employment of women has been the single fastest growing segment of the Canadian labor force over the last dozen years.

Part-time workers, an increasing component of the Canadian labor force and predominantly female, have lower average hourly wages and lower rates of pension coverage than do full-time workers. In 1984 the average hourly wage of part-time workers was 66% of that of their full-time counterparts. Few part-time workers are unionized or covered by collective agreements. In 1984 only 16% of all part-time workers were union members compared with 38% of their full-time counterparts. Similarly, in 1984 a mere 9% of part-time workers compared with 49% of full-time workers were covered by an employer-sponsored pension plan.

Concomitant with the changes discussed above, persistent high levels of unemployment have developed in the Canadian economy, especially since 1975. Unemployment in Canada during the 1980s, even in 1988 after a steady decline in the overall rate since 1986, has been higher than at any other time in the post World War II period. The official rate of unemployment in Canada has remained considerably above 10% from 1981 onward. Only since the latter part of 1987 has it tended to edge toward slightly

below this level. The real rate is considered to be much higher than the official rate (Canadian Social Trends, 1987; Drache & Cameron, 1985, pp. 3-22). Moreover, the experience of unemployment is not evenly distributed across all population groups. Unemployment is much more heavily concentrated among young people, those with minimal education being the worst off.

The current high unemployment rate is essentially structural in nature. It is the result of vast technological change characterized by the deployment of computers and other microtechnologies such as robotics. Unemployment also reflects the movement of capital to new locations, or to new sectors and industries when unionization of labor and corporate taxation policies create impediments to smooth capital accumulation. New technologies displace traditional labor skills and alter the pattern by which labor can be utilized to maximum advantage. But most of the jobs and labor skills for which the new technology creates demand do not seem to require complex education and training. Reviewing the recent projection for medium-term labor requirements of Canada Employment and Immigration Commission, the Report of the Royal Commission on the Economic Union and Development Prospects for Canada (Volume II, 1985) comments that "The largest absolute numbers of new job openings are likely to occur in occupations such as secretarial and stenographic services, bookkeeping, truck driving, janitorial services, public dining services or nursing" (p. 746).

Increases in part-time employment, long-term unemployment, and jobs in low-paid service occupations in which increasing proportions of already disadvantaged groups such as women are employed and becoming increasingly concentrated are some of the obvious consequences of the current restructuring of capital and work in Canada. But what is less obvious, for it is contrary to conventional wisdom, is the fact that most of the new jobs that it creates are low skill and low status. The great majority of these jobs "in the foreseeable future will not require major shifts in educational preparation.... For many jobs, even the recent emphasis on 'computer literacy for all' is increasingly questioned" (Rinehart, 1987, p. 168). The Report of the Royal Commission on the Economic Union and Development Prospects for Canada (Volume II, 1985) also noted

that the evidence that technological and economic change would require a more highly-skilled and sophisticated labor force was not necessarily compelling. Rather, it seemed that the skills required of the labor force over the rest of the century might be somewhat different in content from the current mix, but not a great deal more sophisticated. (p. 757)

The picture that emerges from my review of the situation is one of decisive shift in the Canadian occupational structure toward low-skill, low-pay, and low-status jobs in services, part-time jobs, long-term unemployment, and a labor market that is becoming more radically segmented.

The large increase in the participation rate in adult education noted earlier is paradoxical in the context of changes in labor markets just described. The paradox becomes all the more profound in light of the evidence that, despite the rapid adoption of the new technologies in the workplace over the

last decade or so, educational requirements for jobs have generally not increased and many people today are seemingly overeducated for the jobs they hold (Livingstone, 1987a). High levels of unemployment persist not so much for want of appropriate levels of education in the labor force but due to scarcity of good jobs (Harvey & Blakeley, 1985).

This paradox, however, is more apparent than real. Sources of the current pressure on Canadians to seek further educational qualifications are multifarious. Increased threat of unemployment, heightened sense of job insecurity, increased pools of surplus well-educated labor, mounting demand for retraining contingent on the introduction of new technologies, and the growing scarcity of attractive and challenging jobs are among many of the structural sources of this pressure. Another important factor is the shift in government policies concerning employment and job creation following its abandonment of Keynesianism and the shift to monetary gradualism in 1975. Full employment was soon discarded as a central objective of public policy. Adoption of the economic paradigm has led the government to stress *training* for employment and jobs rather than *direct job creation*. Although the main policy thrust since 1982 has been on encouraging and financing on-the-job training programs, it is likely to have reinforced the pressures on adults for further education and training through the familiar institutional route which the federal government has continued to use to provide a significant portion of Canada's occupational training. If the present emphasis on job training in government policy and private pursuit for further training related to perceived labor market dynamics continue, adult education is likely to become progressively vocationalized.

Conclusion

During the 15 or so years immediately preceding the economic slump that hit the global capitalist economy in the early 1970s, Canada shared in the general prosperity provided by sustained economic growth and expansion. Its educational system grew and diversified in the context of economic growth and prosperity under the dual influence of human capital theory and progressivism. The pattern of growth of adult education reflected in its programs a certain balance between the goals of occupational training and "combating poverty" (investment in human capital) and cultural development/personal growth (education for personal consumption). The near-amnesia induced by the prevalent "end of scarcity" doctrine hid from view the tensions inherent between the doctrines of human capital and progressivism as well as the contradictions that always simmer and occasionally boil over that are integral to capitalism. As the contradictions burst open the institutional arrangements hammered out by social classes under corporate capital's hegemony, progressivism in the educational arena comes under attack and becomes dispensable. The state, to restore economic growth and reestablish capital's hegemony, attempts "another turn of the screw" (Schechter, 1987). One wonders if it will have education on its side. Knowing that Canadian adult education once, in its early history during the last great crisis of capitalism, stood with its victims as they collectively struggled for

their emancipation, one cannot help but wonder with whom it will side in the current crisis.

Notes

1. As to the nature of the current accumulation crisis, Livingstone (1985) states that During the past decades, private business' aggregate propensity to invest in new production initiatives has been generally depressed, while the restructuring and relocation of large corporate enterprises have de-stabilized many communities; record post-war unemployment levels have persisted, especially for young people; and high interest rates and declining real wages have limited collective consumption capacity. (p. 11)
For a comprehensive discussion of the nature of the crisis, see O'Connor (1984) for the U.S. and Wolfe (1983) for Canada. For a more general discussion see O'Connor (1987).
2. This inference was corroborated by Devereaux's study in 1982.

References

- Adams, R.J., Draper, P.M., & Ducharme, C. (1979, June). *Education and working Canadians: Report of the Commission of Inquiry on educational leave and productivity*. Labour Canada.
- Buckland, L. (1985). Education and training: Equal opportunities or barriers to employment? In *Equality in employment: Royal Commission Report research studies*.
- Campbell, D.D. (1980). On sailing with or against the wind. *Studies in Adult Education*, 12, 13-28.
- Canadian Association of Adult Education. (1982). *From the Adult's Point of View*.
- Canadian Social Trends. (1986, autumn). Ottawa: Department of Supply and Services, Government of Canada.
- Canadian Social Trends. (1987, autumn). Ottawa: Department of Supply and Services, Government of Canada.
- Carnoy, M. (1985). The political economy of education. *International Social Science Journal*, 37, 157-173.
- Cassidy, F. (1987). Adult learning and citizenship. In F. Cassidy & R. Faris (Eds.), *Choosing our future: Adult education and public policy in Canada* (pp. 2-11). Symposium Series/17. Toronto: OISE Press.
- Clark, R.J., & Brundage, D.H. (1982). Adult education opportunities in Canada. In R.E. Peterson, J.S. Helmick, J.R. Valley, S. Shake Graff, R.A. Feldmesser, & H.D. Nielsen (Eds.), *Adult education and training in industrialized countries* (pp. 207-241). New York: Praeger.
- Clement, W. (1983). Canadian political economy. In M.M. Rosenberg, W.B. Shaffir, A. Turowetz, & M. Weinfeld (Eds.), *An introduction to sociology* (pp. 375-400). Toronto: Methuen.
- Cross, M.S., & Kealey, G.S. (Eds.). (1984). *Modern Canada 1930-1980's: Readings in Canadian social history*, Vol. 5. Toronto: McClelland and Stewart.
- Decore, A.M., & Pannu, R.S. (1986). Educational financing in Canada 1970-71 to 1984-85: Who calls the tune, who pays the piper? *Canadian Journal of Higher Education*, 16, 27-49.
- Devereaux, M.S. (1984). *One in every five: A survey of adult education in Canada*. Ottawa: Statistics Canada and Education Support Sector, Department of the Secretary of State.
- Dickinson, G., & Verner, C. (1977). Canada. In *Learning opportunities for adults*, Vol. 4. Paris: OECD.
- Drache, D., & Cameron, D. (Eds.). (1985). *The other MacDonald Report*. Toronto: James Lorimer.
- Gough, I. (1979). *The political economy of the welfare state*. London: Macmillan.
- Harvey, E.B., & Blakeley, J. (1985). *Education, social mobility and the challenge of technological change*. Paper prepared for the Transition to Work conference convened by the Institute for Social and Economic Research, University of Manitoba, Winnipeg.
- Ismael, J.S. (Ed.). (1987). *The Canadian welfare state: Evolution and transition*. Edmonton: University of Alberta Press.

- Kaliski, S.F. (1985). Trends, changes and imbalances: A survey of the Canadian labour market. In C.W. Riddell (Research Coordinator), *Work and pay: The Canadian labour market* (pp. 77-140). Toronto: University of Toronto Press.
- Larson, M.S. (1977). *The rise of professionalism, A sociological analysis*. Berkeley: University of California Press.
- Lenhardt, G. (1981). School and wage labor. *Economic and industrial democracy*, Vol. 2 (pp. 191-221). London and Beverly Hills: Sage.
- Livingstone, D.W. (1985). *Social crisis and schooling*. Toronto: Garamond Press.
- Livingstone, D.W. (1987a). Job skills and schooling: A class analysis of entry requirements and underemployment. *Canadian Journal of Education*, 12(1), 1-30.
- Livingstone, D.W. (1987b). Crisis, classes and educational reform in advanced capitalism. In T. Wotherspoon (Ed.), *The political economy of Canadian schooling* (pp. 57-68). Toronto: Methuen.
- Marchak, P. (1985). Canadian political economy. *Canadian Review of Sociology and Anthropology*, 22, 673-709.
- National Advisory Panel on Skill Development Leave. (1984). *Learning for life: Overcoming the separation of work and learning*. Report to the Minister of Employment and Immigration. Ottawa: Minister of Supply and Services.
- O'Connor, J. (1973). *The fiscal crisis of the state*. New York: St. Martin's Press.
- O'Connor, J. (1984). *Accumulation crisis*. New York: Blackwell.
- O'Connor, J. (1987). *The meaning of crisis: A theoretical introduction*. New York: Blackwell.
- Panitch, L. (Ed.). (1977). *The Canadian state: Political economy and political power*. Toronto: University of Toronto Press.
- Panitch, L. (1987). Capitalist restructuring and labour strategies. *Studies in Political Economy*, 24, 131-149.
- Pitman, W. (1987). The cultural connection. In F. Cassidy & R. Faris (Eds.), *Choosing our future: Adult education and public policy in Canada* (pp. 131-146). Symposium Series/17. Toronto: OISE Press.
- Report of the Royal Commission on the Economic Union and Development Prospects for Canada, 1985 (Vol. II).
- Riddell, C.W. (1985). *Work and pay: The Canadian labour market*. Toronto: University of Toronto Press.
- Rinehart, J. (1987). *The tyranny of work alienation and the labour process*. Toronto: Harcourt Brace Jovanovich.
- Rubenson, K. (1987). Adult education: The economic context. In F. Cassidy & R. Faris (Eds.), *Choosing our future: Adult education and public policy in Canada* (pp. 77-102). Symposium Series/17. Toronto: OISE Press.
- Sacouman, J.R. (1979). The differing origins, organisation, and impact of Maritime and Prairie co-operative movements to 1940. In R.J. Brym & J.R. Sacouman (Eds.), *Underdevelopment and social movement in Atlantic Canada* (pp. 37-58). Toronto: New Hogtown Press.
- Schecter, S. (1977). Capitalism, class, and educational reform in Canada. In L. Panitch (Ed.), *The Canadian state, political economy and political power*. Toronto: University of Toronto Press.
- Schecter, S. (1987). Another turn of the screw: Education reform in progress. In T. Wotherspoon (Ed.), *The political economy of Canadian schooling* (pp. 45-56). Toronto: Methuen.
- Selman, G., & Kulich, J. (1980). Between social movement and profession—A historical perspective on Canadian adult education. *Studies in Adult Education*, 12, 109-126.
- Task Force on Skill Development Leave. (1983). *Learning a living in Canada*, 2 vols. Ottawa: Ministry of Supply and Services.
- Therborn, G. (1986). *Why some people are more unemployed than others*. London: Verso.
- Thomas, A. (1987). Government and adult learning. In F. Cassidy & R. Faris (Eds.), *Choosing our future: Adult education and public policy in Canada* (pp. 103-130). Toronto: OISE Press.
- Welton, M. (1987a). On the eve of a great mass movement: Reflections on the origin of the CAAE. In F. Cassidy & R. Faris (Eds.), *Choosing our future: Adult education and public policy in Canada* (pp. 12-35). Toronto: OISE Press.

- Welton, M. (1987b). Vivisecting the nightingale: Reflections on adult education as an object of study. *Studies in the Education of Adults*, 19(1), 46-68.
- Wolfe, D.A. (1983, summer). The crisis in advanced capitalism: An introduction. *Studies in Political Economy*, 11, 7-26.
- Wolfe, D.A. (1984). The rise and demise of the Keynesian era in Canada: Economic policy, 1930-1982. In M.S. Cross & G.S. Kealey (Eds.), *Modern Canada 1930-1980's Readings in Canadian social history*, Vol. 5 (pp. 46-80). Toronto: McClelland and Stewart.
- Wotherspoon, T. (Ed.). (1987). *The political economy of Canadian schooling*. Toronto: Methuen.

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Adult Education and Training in Mexico

This article provides a description and critical appraisal of adult basic education and skill upgrading programs in Mexico. What others can learn from the Mexican experience is outlined and then examined in relation to three basic approaches to adult education.

In 1980 Mexico reached 98% of the effective demand for primary education (the population of six-year-olds seeking admission to primary schools). Although terminal efficiency rates for primary education are still low (50% of those who enter primary school complete their primary education within six years), it can be said that one of the main causes producing adult illiterates is being rapidly eliminated.

This educational expansion phenomenon occurs within a context of enormous socio-economic and cultural inequalities. Educational expansion also reproduces inequality due to several factors that result in low achievement rates, school failure, and school abandonment. The factors that reproduce inequality within the educational system itself must be recognized as important: unequal distribution of qualitative and quantitative human, physical, and material resources that negatively affect the less favored groups and regions. The result of this inequality is that educational marginalization is becoming less a consequence of the scarcity of educational services and more dependent on factors of a qualitative nature such as social, economic, and cultural differences.

Despite these conditions, an examination of the relatively recent phenomenon of full attention to the effective demand for basic education, as well as that of nearing the residual rate of illiteracy defined as 4% by UNESCO, yields some useful insights. In the following pages, the historical development of adult education in Mexico and the problems that it has faced are reviewed. We indicate the lessons that can be learned from this Mexican experience and highlight the problems that have not been attended to. We also interpret the achievements and difficulties of the present adult educational policy.

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Recent Historical Background

The National Law of Education for Adults was first published in 1975 (Poder Legislativo Federal). Inspired by the principles of lifelong education, this law establishes the conditions for operating diverse forms of extra-school education. Adult education is defined as "a form of out-of-school education based on self-learning and social solidarity ... in order to obtain, transmit and increase culture and to fortify the conscience of unity among all sectors of the population" (Article 2). The objectives of adult education are defined as follows:

1. To give every person 15 years of age and older the possibility of reaching the level of knowledge and abilities equivalent to a general basic education that includes primary and secondary education.
2. To foster permanent education through the study of all types of specialties and activities, on-the-job and for-the-job training, as well as permanent professional training.
3. To foster self-learning.
4. To develop physical and intellectual aptitudes as well as a critical consciousness in the student.
5. To elevate the cultural levels of those marginal sectors of the population so that they may participate in the responsibilities and benefits of a shared national development.
6. To propitiate the creation of a consciousness of social solidarity; to promote the improvement in family life, work life, and social life.

The National System for Adult Education was established to facilitate the operation of the National Plan for Adult Education and the adult education law. It is comprised of:

1. A literacy campaign using new curriculum guides based on the global structural analysis method for teaching reading and writing. Literacy is now conceived as the "introductory level" to elementary education.
2. A program of primary education for adults consisting of three levels and four areas (mathematics, Spanish, social sciences, and natural sciences) per level. This program includes a textbook designed especially for the adult population for each level in each area (12 in all) that is distributed at no cost to the learner.
3. A program of secondary education for adults consisting also of three levels and the same four areas. The program also includes 12 textbooks distributed at low cost to the learner.
4. A "circles of study" system of volunteer tutors who help the adult student organize his or her learning. However, the adult may choose a self-learning strategy.
5. A system of evaluation and certification that permits the adult student to accredit a whole level, a complete cycle, only one area, or any combination of areas and levels according to his or her personal rate. Exams are offered on a national level every two months.

In 1981 the National Institute for the Education of Adults (INEA, in Spanish) was established. The general objective of this institute is to offer education programs that contribute to the development of the capacities of the adult population in order to improve the quality of their lives and to promote the social and economic welfare of the country.

The INEA offers the prospect of unifying and professionalizing the multiple programs in adult education that had been without unity until 1981. During the first few years of its existence, the INEA implemented programs that covered the following areas: literacy training, basic education, job training, and cultural improvement. These programs sought to enhance educational quality and establish productive relationships with the economic and social system.

The program of highest priority was the literacy training program. This ambitious program aimed to teach reading and writing to one million adults in 16 months, and to maintain the subsequent literacy skills in order to ensure that the illiteracy rate would be reduced drastically from 17% to 2% by 1990. Although 600,000 adults became literate in those 16 months (INEA, 1987a, Appendix 3), this aim has not been met. The main reason for this seems to be the lack of a developed organic structure within the new institute due to the extensive projects under its auspices.

The INEA programs were carried out in the context of a favorable economic climate in the country. The Echeverría regime (1976-1982) ended with the discovery of huge oil deposits in southeastern Mexico. However, it was President López Portillo (1982-1986) who took advantage of these resources for national development. The economic boom that resulted and the enormous input of external loans to finance the oil venture enabled a considerable increase in social expenditure, particularly in the educational realm. It was a time of creative political decision making in a national context where economic resources were abundant. The problems that these debts would bring in the near future, together with the decrease in productive investment, the drop in international oil prices, and the increase of interest rates in the international financial market, helped cause the well-known crisis that occurred at the end of this regime. The consequences of this crisis for educational development were enormous, especially for the rapid expansion in primary educational services.

Present Educational Reality

Soon after taking office, President Miguel de la Madrid (1982-1988) announced his intention of carrying out an "Educational Revolution." This entailed improving the quality of education while maintaining and extending the quantitative advancements of the previous years.

The National Program of Education, Culture, Recreation and Sports (1984-1988) was intended to plan and implement this educational revolution. It aimed to improve the quality of education at all levels starting with the integral training of teachers; rationalizing the use of the available resources; extending the access to educational services for all Mexicans by giving special and privileged attention to marginal regions and groups; and regionalizing and decentralizing basic education and teacher education; and

reducing the concentration of higher education, research, and cultural activities (Poder Ejecutivo Federal, 1984, p. 38).

More than three years after the program for the educational revolution was published, however, significant provisions of educational programs for target populations have been few and indirect. The educational revolution dwindled down to two important reforms: the elevation of teacher education from a technical to a higher level of education, and the decentralization of basic education and teacher education.

Literacy Training

The most important and successful of INEA's adult education programs is the National Program for Literacy Training. Between 1930 and 1980, the absolute number of illiterates who were 15 years of age and over remained constant at 6.5 million, even though the rate of illiteracy had progressively diminished, largely as a result of the expansion of formal schooling. Since 1981, because of the sustained efforts of the National Program for Literacy Training, the absolute number of illiterates began to drop, reaching 3.7 million in 1986. This means that the illiteracy rate declined from 13% to 7.7%. By 1988 the illiteracy rate is expected to be reduced to its residual number (4%).

Attainment of the goal of teaching the skills of reading and writing to 4.1 million adults in five years required a massive investment of time, energy, and money. Thus in 1986 alone, one million adults became literate. The strategy employed in providing services contained two key elements: (a) giving special attention to those regions with the highest illiteracy rates (INEA, 1987a), and (b) adapting methods, materials, and content to the needs, interests, and circumstances of rural, urban, and Indian groups (INEA, 1987b), including the reduction in "generative words" from 15 to 12.¹

The program for the literacy training still faces great difficulties. Those internal to the program include: (a) deficiencies in the information base for planning, (b) lack of skill and high turnover among "operational agents," and (c) inflexible and unresponsive infrastructures centrally and regionally.

The main difficulties, however, are those external to the program: the marginality, dispersion, and extreme poverty of the illiterate population. Arising from these conditions are three major problems which are likely to persist unless major policy and operational reforms are undertaken. One is the continuation of high drop-out rates. Reducing the drop-out rate to 35% is a great achievement. However, if this rate remains constant, 1,300,000 adults will remain illiterate.

A second is the lack of attention given to the most marginal population. Although what is now being done to teach the Indian population in their mother tongue is commendable, 800,000 monolingual Indians in 56 ethnic groups scattered throughout the country remain unaffected by the program.² The goal established in 1987 to reach 250,000 adult Indians seems unreasonably high because the textbooks for teaching literacy in the mother tongue are, in most instances, still being designed. If those unaf-

fectured by current efforts are added to those who drop out, the total number of illiterates becomes about two million. The migrant population is also being overlooked. This population has been estimated at approximately 700,000 adults. The migrant cane-cutters number around 100,000, and many of them migrate with members of their nuclear family (Juárez, 1986, p. 14). To these cane-cutters, the populations of the cotton, tobacco, and tomato harvesters must be added. There is also the population that migrates seasonally to the United States. The semiproletarianized peasant population is estimated at five million, and the illiteracy rate among these adults is higher than average.

The third problem is the lack of emphasis on postliteracy training. Planners have ignored the accumulated evidence regarding the failure of massive literacy campaigns when societal contexts remain unaltered and when additional provisions are not made for ensuring the permanence of the acquired abilities.

In Mexico, literacy training is conceived as a first step in a process that includes primary education and training for activities adequate to meet the needs of the adult. This concept places restrictions on postliteracy training. There is no reason to believe that all literate adults are interested, or have the need, to enter a long educational process leading to certification. Moreover, the Community Education Program—cultural promotion and for-the-job training—has at present a small capacity and is unable to provide for all those who wish to participate.

Basic Education

Another of the programs for which the INEA assumed responsibility is that of Basic Education for Adults. The potential clientele for this program are the 30,000,000 Mexicans who are 15 years of age or older and who have not had access to, or have not finished, primary or secondary education. When the INEA inherited this program, the curriculum for primary and secondary education was already defined, the textbooks prepared, and its operational system designed. During the last five years, participation in the program has progressively increased to the point where 1.5 million adults are involved, about 5% of the potential demand. However, its terminal efficiency is exceedingly low (18% in primary education and 21% in secondary education).

To alleviate these shortcomings, INEA (1986) has proposed a transformation in the nature and organization of the teaching-learning process rooted in a concept of adult education as

the extra-school mode of national education that, based on self-learning and social participation, has the end of becoming, for those Mexicans that did not finish their basic education when they were of school age, the principal means of acquiring, transmitting and enriching culture through participating in a systematic, orderly and certifiable manner, of universal knowledge and of those elements that give our country its specific profile. It seeks to fortify intellectual habits, to favor the formation of attitudes of social solidarity and those values that support, in liberty and dignity, a full life. All this within the framework of the satisfaction of the needs of society and of the students, with the objective of contributing to the improvement of their conditions of life. (p. 66)

The curricular redefinition of primary education for adults is now under way, and the related instructional materials are being developed with local adaptations receiving particular attention.

Community Education

INEA launched two other programs at the national level: Cultural Promotion and For-the-Job Training. In 1985, these two programs were merged into one, now called Community Education. This program seeks to transmit knowledge and abilities that in themselves have an immediate usefulness and are not bound by a formal curricular sequence. It is conceived as a form of group education and favors collective work. The target population is those over the age of 15 from marginal sectors of the population. Priority attention is given to rural communities with between 500 and 2,500 inhabitants, as well as to marginal districts in urban areas (INEA, n.d., p. 121).

To date, the Community Education Program has taken the following forms.

Culture halls. The halls are directed toward rural populations. At the end of 1986, 200 halls were in existence throughout the country.

Meeting points. These are designed for the inhabitants of marginal urban districts. There are 33 of these centers.

Education and recreation camps. This activity is available in temporary population concentrations of more than 100 migrant workers where the working season is three months or over. In 1986, 10 camps were in operation.

Popular theater. The theater is coordinated by a "drama guide" for six months. During this period, the guide prepares one of the members of the group to carry on the activities. Fifteen of these groups are now functioning.

Community workshops. These are directed toward rural communities. They consist of an appropriate physical space and a package of multiple-use tools and simple machinery for the production of goods and services. There are 29 workshops in operation.

Productive units. Both rural and urban marginal populations are served by these units. There were 46 of them in operation at the end of 1986.

Training for the creation of employment opportunities. These are short courses designed with the aim of creating stable occupations to help solve some of the economic problems of the communities. Between January and October 1986, 4,750 courses were given (INEA, 1987a, pp. 123-170).

The Community Education Program is now being reviewed and revised. The aim is to design a unitary model for the training of educational agents, as well as to initiate four large new projects: health education, family education, history and culture of the community, and civic education.

Job Skills Training

Job skills training was initiated during the Lázaro Cárdenas regime (1934-1940). The technical training of workers and peasants was oriented toward making them capable of assuming the administration of collective productive units, like the *ejido* and other cooperative enterprises. Later regimes

viewed training as an instrument for productive work. The private sector was called on to suggest the number and characteristics of the working force that state institutions should train. Hence, between 1940 and 1958, many of the institutions for technical education created by Cárdenas disappeared and private institutions were established. In spite of this transformation, and in spite of the fact that both the State and society considered the industrialization process as a high priority, technological education was not an important aspect of educational policy. Consequently, a gap between what modern industry needed in a skilled labor force and what the educational sector was offering was created during these years (Solórzano & Christian, 1986, p. 211).

After 1958, technological education received much more systematic and visible support. However, it not receive the social acceptance that was expected from the student population or from employers. University education continued to represent the best alternative for gaining employment (Solórzano & Christian, 1986, p. 212).

Job training for the marginal population started in 1976. It stemmed from recognition of the alarming growth of unemployment and underemployment rates, both in the urban and in the rural areas. Despite this, the most important institutions dedicated to for-the-job training continued to function as part of the national educational system, and on-the-job training became a responsibility of private and public enterprises, which limited their activity to training their own employed labor force.

During this century, the labor force in Mexico has multiplied five times. However, a decreasing proportion of the population is being incorporated into the active working population signaling important changes in sectorial composition. In 1930, the agricultural sector represented 70% of total employment but now is reduced to 35%. The service sector grew from 15% to 40% during this same period and the industrial sector grew from 14% to 25%. The service sector has been absorbing 50% of the new jobs that are being created, with the industrial sector responsible for 30% of total job creation. Nevertheless, this rate of growth has always been below the urban growth rate and thus has contributed to the increase in the service sector, mainly through the creation of low-productivity occupations considered part of the marginal or informal economy. This has led to the development of segmented labor markets and to a marked differentiation in the structure of production.

The economic crisis that hit the country in 1982 has aggravated many of these problems: many workers have been fired, a number of industry or business establishments have been closed, and economic activity has stopped in certain sectors. This is reflected in an increase of the (overt) unemployment rates and especially in underemployment rates. To reverse this situation, structural changes are required.

President de la Madrid's administration established four main strategies for training:

1. Changes in the juridical framework of job training. This strategy includes the possibility of modifying the Federal Labor Laws with the ob-

- ject of creating a legal framework for training those who belong to the informal sector of the economy.
2. The reformulation of financing mechanisms for the support of training programs. These programs should be financed by productive units and regulated by the State. Regional decentralization of training opportunities is also a priority.
 3. The linking of scientific and technological development to training procedures.
 4. The coordination of training activities between the public, private and social sectors, as well as the inclusion of organizational and administration elements from productive units. The extension of training services to the urban, informal sector workers and to the traditional rural workers is also necessary (Secretaría del Trabajo y Previsión Social, 1985, p. 19).

Training in Mexico may be divided into for-the-job training and on-the-job training. The first mode of training is subdivided into formal and non-formal education. Formal education for-the-job training is the responsibility of the National Educational System, and specifically of the National Technological Educational System. This latter system is oriented toward offering individuals general information that may increase their capacity for scientific and technological adaptability and for either continuing their education to higher levels or entering the labor market through terminal options. Its focus is on students at the secondary, university, and postgraduate levels. At the basic level (after primary education), the only options are the Job Training Centers and the Skill Training Centers, which train qualified workers. At the secondary level (junior high school), the system offers general education and terminal options in agriculture, industry, fishing, and services. At the senior high school level, there are schools that offer both the possibility of continuing to higher levels of education and terminal options, as well as schools that offer only terminal options (CONALEP). It is interesting to note that this latter mode of technological education has grown considerably during the past few years. Registration in CONALEPs has evolved from 3,900 students in 1979-80, to 19,087 in 1980-81, to 72,847 in 1982-83 (Secretaría del Trabajo y Previsión Social, 1985, pp. 65-77).

Nonformal, for-the-job training programs are designated for the population that has no access to the higher levels of the formal educational system. These programs are much shorter than the formal ones and are not always carried out in classroom settings. Among the institutions and services involved are:

The Mexican Institute for Social Security. Its training programs are designed for the marginal classes of the country. There are 108 units with 336 workshops and 356 full-time instructors. Recently it has oriented its courses toward training for self-employment. It offers 27 courses in industrial and service training, four in crafts, and three on income protection. The admission requirements are being older than 13 years of age and being literate and competent in the four arithmetic operations. Courses last three months and classes are held daily under a six-hour schedule.

The National System for the Integral Development of the Family. This program operates autonomously in each one of the states of the country. In the Federal District, there are 23 Community Development Centers and 13 Urban Social Welfare Centers. These trained 8,000 persons in 1984 in fields such as sewing, secretarial skills, and beauty sciences. Some courses are offered in auto mechanics, carpentry, and industrial sewing, but without workshops.

The Ministry of Fishing. It offers training for fishing workers. In 1983, 3,800 adult students participated.

Scholarships for the Training for Workers. This service is coordinated by the Ministry of Labor and Social Welfare. The objective is to incorporate workers who have lost their jobs due to the economic crisis into a system of training based on scholarships. The Ministry directs individuals to various existing training programs and pays them a minimum salary for the duration of the course. In 1984, this program offered 55,800 scholarships and channeled adult students to 1,860 courses (Secretaría del Trabajo y Previsión Social, 1985, pp. 81-84).

On-the-job training programs are the responsibility of the productive units and are simply coordinated by the Ministry of Labor and Social Welfare. However, only about 50% of the workers in the formal sector of the economy have access to these training programs which are concentrated in Mexico City in the larger industries, and in the modern sector of the economy. On-the-job training is not being carried out in medium and small-scale industries. They possess neither the infrastructure nor the financial resources to systematically develop such programs, or to seek the professional training services of outside institutions.

In 1985 INEA conducted a study to determine the national supply of training courses for the informal sector of the economy (INEA, 1985). The study revealed that in total 156 different institutions offer this type of training in 26 states of the country, 90% of which are in the public sector. Only 3% belong to the private and social sectors respectively. Moreover, among the courses given, only 40% offer for-the-job training. The remainder were for family welfare (40%), for recreation (9%), and for civic and political participation (11%). These courses have directly benefited 1,280,407 individuals in 421 localities.

Overall, there is little doubt that Mexico has developed a set of policies that has permitted significant advances in the quantitative struggle against illiteracy. However, the exaggerated emphasis on numbers has left unaddressed the quality of the service and the continuity of the results. The focus on literacy has perhaps downgraded the importance and the outcomes of both Basic Education and Community Education. The first of these programs, after strong self-criticism, has redefined its activities in form and content. The second program, which is of the utmost importance for the marginal population because it is preparation for economic activities, has yet to demonstrate its value or admit its shortcomings and subsequently propose alternatives. Other programs are just beginning to effectively reach

marginal populations and these are not being focused on job-attainment but on self-employment or family and community welfare.

Despite the current economic crisis, Mexico has been able to take huge steps toward eliminating illiteracy. Unfortunately, few actions are being undertaken to consolidate that which has already been achieved and to improve other areas of similar importance in adult education—notably skill upgrading programs or job-training programs.

Learning from the Mexican Experience

In retrospect, there appear to be at least seven lessons to be learned from the Mexican experience in adult education.

1. The educational attention to marginal populations has experienced its most spectacular advances when specialized financial and human resources have been assigned to this purpose.
2. Educational attention to marginal populations has resulted in important steps forward when vertical planning and uniformizing systems have been abandoned. The fact that for the first time in our history we are reaching marginal populations with educational services has taught us the need for “adapting” the service to the characteristics of the population being attended to. This has implied the reversal of ordinary patterns of educational planning where it is expected that the individuals and the learning groups must adapt themselves to the characteristics of the service being offered.
3. Closely related to the previous point is the need to link the planning process with the regional and local realities as well as to the particular characteristics of specific population groups with whom educational activities will be carried out.
4. Gains in basic education and literacy training by marginal populations should not lead to the discontinuation of the programs responsible for them. It is necessary to sustain the impulse that gave rise to this achievement in order to ensure its permanence. For example, it would be a great mistake to end the literacy program once the residual illiteracy rate is achieved.
5. The attainment of important quantitative goals with marginal populations implies heavy expenses, sustained efforts, and administrative and curricular innovations. Improving the quality of the education is much more difficult than what was originally expected. This is now the country’s greatest challenge, especially among marginal populations. If the quality of education is not improved, the system will continue to produce absolute and functional illiterates, and educational inequality will continue to characterize the social and political structure. The State should decide on a policy that initiates the struggle for educational quality directly with marginal populations.
6. Despite the achievements with marginal populations, there remain discrepancies and disparities in the services provided. For example, the very small and poor rural communities have to pay for the construction and maintenance of their school building, and in some cases for the food

and lodging of the teacher as long as he or she remains in the community (Schmelkes, 1983, pp. 9-47). Small communities and Indian populations are assigned human and physical resources that are inferior to those assigned on average to the educational system. Marginalized populations are still the last to be educationally served. The adult literacy program, for example, is just considering the possibility of offering specialized services to a part of the Indian population and no program for migrant populations has yet been designed. A comprehensive policy for marginal populations should not only consciously avoid these clearly unjust treatments, but it should also assign the best resources—especially human resources—to these populations.

7. The greatest challenge facing adult education arises from the growing isolation of the educational process from the broader social and economic processes in the country. This phenomenon helps to explain the difficulties that adult education programs are facing in adjusting the supply of services to that which the adult population requires; in avoiding high drop-out rates from adult education programs; and in insuring the usefulness and relevance of the educational results of these programs (Schmelkes, 1986, pp. 2-7).

Conclusion

There are three main approaches to adult education: (a) that which stems from the practice of adult education in First World countries, (b) that which is designed "for" the Third World, and (c) that which is being drawn up "from" Third World countries.

In the first approach we discover the theoretical basis for lifelong education that is an education prolonged from the moment the individual abandons formal schooling until the end of his life. The aim of lifelong education is to assure every person an active political, economic, and social life in a society that functions "properly."

The second approach which is designed "for" the Third World has experienced a historical evolution—from the optimistic conception of adult education, in the sense that it is capable of eliminating ignorance and therefore poverty, to the skeptical conception that leads to the assumption that adult education is useful only in contexts that are undergoing important transformations. In either case, however, adult education is understood as a service offered by the State whose function is to ensure that the entire population has access to the basic culture of the nation.

The third approach stemming from adult educational praxis in Latin America has also suffered a historical evolution—from a conception that prioritizes the transformation of consciousness (awareness) to one that understands adult education, as popular education, to be an instrument that supports transformation processes and responds to the interests of the popular sectors of the population. Contrary to the other two approaches, this one does not define the beneficiary as someone who lacks knowledge and abilities. It understands "the social group" as lacking the instruments that may help them socially defend their interests. From this third approach, two main assumptions have been derived. The first emphasizes

literacy training and basic education for adults that cannot be conceived of as ends in themselves. The second assumption asserts that illiteracy and the lack of schooling among adults must be considered and understood as an integral part of structural poverty. So conceived, there is little sense in attacking only one of the factors that comprise structural poverty, if what is being sought is to achieve an impact on the whole society.

The action of the State in adult education in Mexico is congruent with the second of these approaches. Undoubtedly, it will continue in this direction. This will allow the system to improve program content, adjust and rationalize its methodology, and solve its administrative problems. The natural growth of schooling will lead in a not-too-distant future to the design of forms of postliteracy training and lifelong education options. Ways will likely be found to decrease drop-out rates and to maintain adult interest in the programs. Thus there will be a statistical decrease in the illiteracy rates and an increase in the number of adults with a basic education certificate.

However, we may ask if following this direction means that the system will continue to have a negligible impact on the substantial problems of its target population. Present adult education efforts are concentrating on peripheral needs, not on the most important ones. To continue with this approach implies that adult education will be an isolated educational activity; knowledge is transferred, special abilities are transmitted, and, optimistically, instruments are offered that allow adults to individually improve their living conditions.

The alternative implies recognizing that if adult education were willing to abandon its narrow disciplinary view, it could become a vital starting point for attending to the needs of the marginal populations. This would be a qualitative leap in the State's dominant conception of adult education. The precedent is found in the third approach to adult education mentioned above. Herein the system would seek to support learning processes that are oriented toward the transformation of the objective social conditions that comprise the most pressing needs of the target population. Adult education would work with *subjective* conditions which experience with popular education shows energizes and reinforces these processes. Within this alternative viewpoint, it is clear that the definition of the processes of change in *objective* conditions must be defined by the specific population with whom one is working. It is also clear that the decision regarding the types of changes to be fostered is not found only within the sphere of decision making of adult education institutions. The communities should fully participate and take control of the process.

The activities carried out by many popular education groups in Latin America have shown that this is the approach that places educational activity in its just dimension and that yields the greatest benefits for the population being attended to. The near future of adult education, in the hands of the State, will have to decide between the following options: Will it continue to simply administer a service, or will it effectively contribute to

the solution of the problems experienced by the target population in the country?

Notes

1. The literacy method used by INEA is that of the "generative word," based on Paulo Freire's literacy method for conscientization. For a description of the method see La Belle (1986) and Zachariah (1986).
2. Estimates based on data provided by INEA.

References

- Instituto Nacional para la Educación de los Adultos. (n.d.). *Programa de educación comunitaria*. Mexico: Author.
- Instituto Nacional para la Educación de los Adultos. (1985). *Estudio sobre la oferta de capacitación para la población ubicada en el sector informal de la economía*. Mexico: Author.
- Instituto Nacional para la Educación de los Adultos. (1986). *Educación básica*. Tomos I y II. Mexico: Author.
- Instituto Nacional para la Educación de los Adultos. (1987a). *Plan de acción del programa de alfabetización para 1987*. Mexico: Author.
- Instituto Nacional para la Educación de los Adultos. (1987b, enero). *Gaceta estadística*, No. 5. Mexico: Author.
- Juárez, I. (1986). *Estudio regional sobre los cortadores de caña del bajo Veracruz*. Mexico: UNAM.
- La Belle, T.J. (1986). *Non-formal education in Latin America and the Caribbean: Stability, reform or revolution?* New York: Praeger.
- Poder Ejecutivo Federal. (1984). *Programa nacional de educación, cultura, recreación y deporte 1984-1988*. Mexico: Author.
- Poder Legislativo Federal. (1975). *Ley nacional de educación de adultos*. Mexico: Author.
- Schmelkes, S. (1983). La Participación de la comunidad en el gasto educativo. *Revista Latinoamericana de Estudios Educativos*, 8(1).
- Schmelkes, S. (1986). *Educación de adultos, alfabetización y empleo en México*. Ponencia presentada al Coloquio sobre el Estado Actual de la Educación en México. Mexico: Centro de Estudios Educativos.
- Secretaría del Trabajo y Previsión Social. (1985). *Oferta y necesidades de capacitación 1985-1988: Técnicos, operarios calificados y semicalificados*. Mexico: Secretaría del Trabajo y Previsión Social.
- Solórzano, G., & Christian, M. (1986). *Un análisis histórico de la educación tecnológica en México (1934-1982)*. Tesis para optar por el título de licenciado en Ciencias Políticas y Administración Pública. Mexico: UNAM.
- Zachariah, M. (1986). *Revolution through reform: A comparison of Sarvodaya and conscientization*. New York: Praeger.

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Adult Education, Literacy Training, and Skill Upgrading in Tanzania

Tanzanian efforts at reducing illiteracy in the country have been impressive. The authors trace the developments that facilitated this achievement, and describe the goals sought and the means employed. Certain shortcomings in the approach to adult education are also identified.

Adult education in Tanzania is not a postcolonial phenomenon. Some attempts at providing education to selected groups of people were made during the colonial period; however, the mass approach through literacy campaigns on a broad scale was solely a postcolonial initiative.

Historical Background

In 1946, the colonial authorities, as part of a community development program, initiated a literacy program for ex-army people residing in welfare centers located in urban areas. In 1949 literacy programs were also started for youth clubs, again mostly in urban areas. The smallness of the effort can be gauged from the fact that the management of all national adult education activities was in the hands of one European welfare officer assisted by two Africans. They were aided by a Women's Service League that was responsible for the education of women. The League organized classes in sewing, knitting, child welfare, and domestic science. Consequently, adult education in general and literacy in particular were piecemeal and localized.

Colonial authorities paid more attention to skills upgrading than they did to literacy. Training in trades and crafts was started by the Germans and was continued by the British colonists. The trainees had to have a minimum of six years of education for admission which meant that such training was restricted to primary school leavers. Government schools were used for courses such as printing, carpentry, tailoring, and wood and metal work. The Post and Telegraph Department and the Land and Mines Department took in apprentices to learn skills appropriate to those services (Buell, 1965, p. 17). The aim of these endeavors by colonial authorities was to obtain junior personnel to help the colonial economy function.

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After independence in 1961, a subsequent reorganization of the government resulted in the appointment of more community development workers to carry out adult education in rural areas. The First Five Year Plan (1964-1969) called for a reduction in illiteracy in order to increase production and led to an intensification of adult education activities. However, the greatest impetus to adult education came in 1967 with the publication of the Arusha Declaration (Nyerere, 1967) as a blueprint for the socialist transformation of the country. It was realized that in order to involve the masses in socialist transformation, the masses had to understand and implement the national policy. Thus a literate population was required.

The first major effort in adult education was the UNESCO/UNDP Work-Oriented Literacy Pilot Project. The project was started in 1968 in the four rural regions bordering Lake Victoria: West Lake, Mwanza, Shinyanga, and Mara. The aims of the project were to stimulate (a) higher production of important cash crops; (b) increased political consciousness and public participation; and (c) improved nutrition. The goal was to reduce the illiteracy rate from 85% to 40% in the four regions by the end of 1973.

This goal was not achieved for several reasons. The project encountered problems of distance as scattered settlements affected regular attendance at central locations. There were also difficulties with transportation and communication which impeded the coordination and follow-up work. Most of the teachers were barely literate, and there was a serious shortage of books and teaching materials.

The turning point in Tanzania's approach to adult education occurred in 1971. In his new year message to the nation, President Julius Nyerere called on the nation to speed up the pace of its literacy campaign. He specifically identified six districts where illiteracy was to be eliminated by the end of 1971. Adult education then focused on literacy training with astonishing results. For instance, Mafia Island had an adult population of 10,000, of which 8,500 were illiterates in February 1971. By the end of March, all the illiterates were enrolled in adult education classes, and by the end of the year the Island had achieved 100% literacy. Similar results were achieved in all the other districts except Dar es Salaam. In Dar es Salaam, the campaign faced problems of organization, coordination, and motivation of the learners.

Efforts were also made in other districts of the country to eliminate illiteracy. Between 1970 and 1971, the teaching force engaged in adult education rose sharply from 1,900 in 1970 to 53,000 in 1971. Secondary school pupils, primary school teachers, and soldiers constituted the bulk of the teaching force.

The mass literacy campaign expanded in all regions between 1972 and 1975 and aimed at eradicating illiteracy by 1975. The success of the campaign was evaluated by administering a national literacy test. When the campaign was launched in 1970, the illiteracy rate was estimated at 67% of the population of 13 million. The results of the National Literacy Test conducted in 1975 revealed a drop in illiteracy to 39%.

Goals of Adult Education

The current goals of adult education in Tanzania are outlined in two documents. The Second Five Year Plan (1969-1974) states the goals of adult education in the following terms: (a) the main purpose and emphasis in adult education will be on rural development; (b) it will include simple training in agricultural techniques and craftsmanship, health education, housecraft, simple economics and accounting, political education, and citizen responsibility; and (c) literacy will be included in response to popular demand as people are aware of its functional importance.

The broad objectives of adult education are defined by the Ministry of Education as: (a) to shake off resignation to the kind of life Tanzanian people have lived for centuries past; (b) to teach people how to improve their lives; and (c) to have all citizens in Tanzania understand the national policies of socialism and self-reliance.

According to Mpogolo (1986), the specific purposes of postliteracy adult education are:

1. to ensure retention of attained literacy capability so that the neo-literates do not relapse into illiteracy;
2. to create literacy environments in the rural areas through a network of rural libraries, rural newspapers, folk development colleges, correspondence education, radio programs, cinemas, and mass campaigns on major bottlenecks in rural development;
3. to provide an alternative system of education for the educational advancement of primary and secondary school dropouts and the whole adult population;
4. to enable adults to broaden their knowledge of the official and national language and of English as the second official language, and to improve their oral and written ability in these languages;
5. to provide national political education to adults;
6. to improve the knowledge and skills of adults in such fields as agriculture, handicrafts, home economics, health, and water supply;
7. to give adults an understanding of simple national economics and economic geography;
8. to give adults useful mathematical knowledge for their daily activities;
9. to develop democratic and cooperative knowledge and skills among adults;
10. to increase the knowledge of Tanzanian and African history and culture and to promote active involvement in cultural activities;
11. to help adults develop leadership skills and attitudes;
12. to achieve a wider understanding of the world and increase the ability to participate in international activities. (pp. 117-118)

Administrative Structure

In 1969, the Ministry of Education became responsible for adult education in the country. It devised a three-pronged strategy for implementing the national adult education policy: (a) every primary school in the country was to be used as an adult learning center; (b) teachers and students of secondary schools, colleges, the university, and other institutions of higher learning

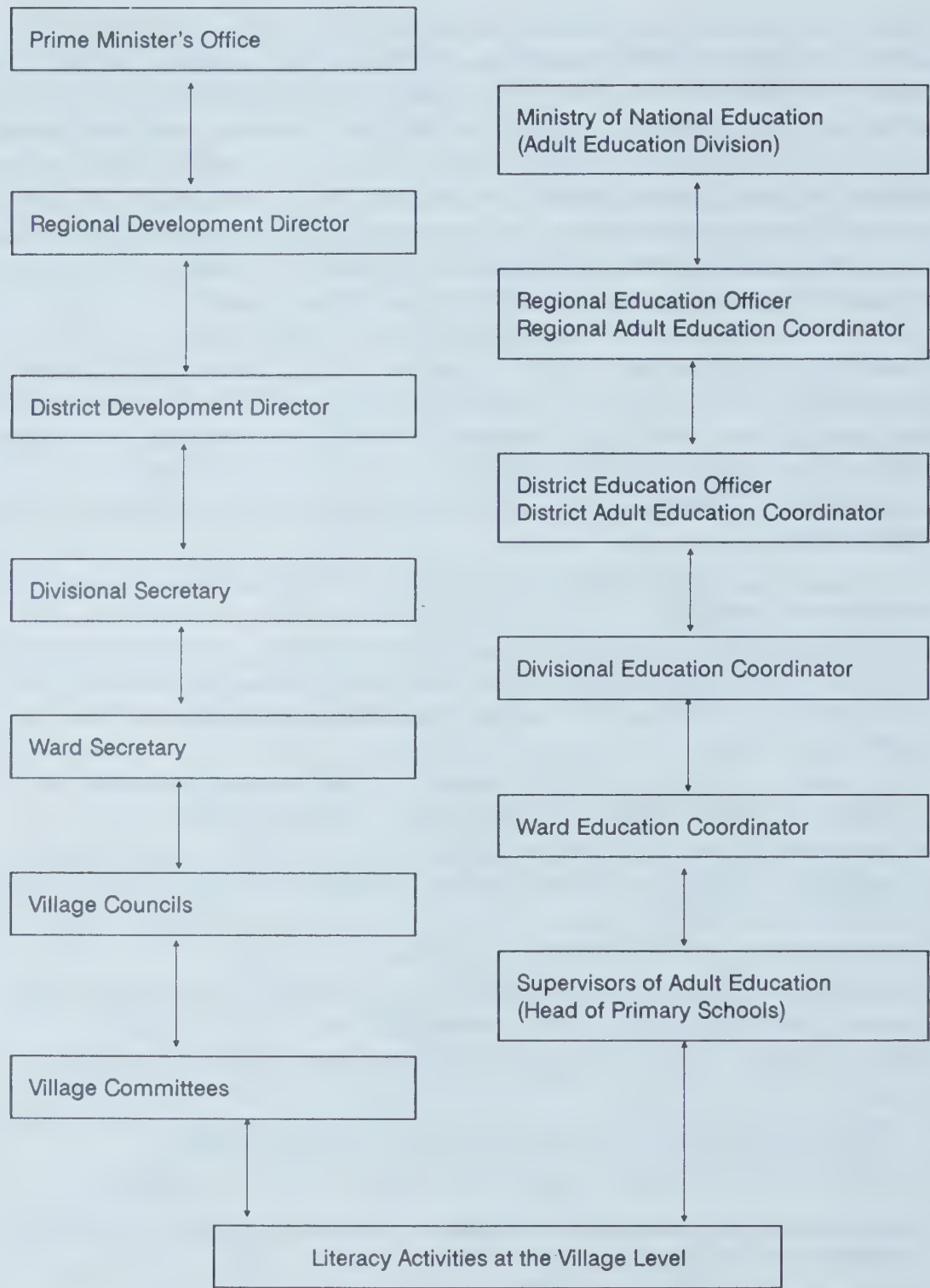


Figure 1: Administrative structure of adult education in the United Republic of Tanzania

were to act as teachers; (c) the Institute of Adult Education, Kivukoni College, Colleges of Education, and the University were to train adult educators.

The administration of adult education was undertaken at both the national and regional levels as depicted in Figure 1. This structure is sup-

ported and aided by a variety of national, regional, and district advisory committees.

Adult Education Programs

Six major programs are offered to adult learners.

Literacy Classes

The most widespread adult education activities are the literacy classes. Every primary and secondary school in the country acts as an adult education center where teachers from the school conduct literacy classes. The extent to which illiteracy has been eradicated is assessed by means of a periodic National Literacy Test.

These tests are conducted periodically, and were conducted in 1975, 1977, 1981, 1983, and 1986. Achievement is measured according to defined levels.

Level I: A participant who has enrolled and has attended two thirds of the literacy sessions in any one year of literacy activities.

Level II: A participant who qualifies for Level I above, and who also has successfully passed one or both tests for the following sublevels:

Sublevel (i): A person who is able to recognize words and symbols, write letters, syllables, numbers, and arithmetic signs, and do some mental arithmetic.

Sublevel (ii): A person who is able to read short, simple, meaningful sentences, is able to write simple short sentences, and is able to add and subtract one figure sums.

Level III: A participant who qualifies for Level II above, and who also has successfully passed one or both tests for the following sublevels:

Sublevel (i): A person who is able to read short, simple, meaningful sentences and can add and subtract two figure sums.

Sublevel (ii): A person who possesses mastery over symbols in their written form or is able to write and read messages. Such a person should be able to perform the following: fluently read a simple text with understanding; write a simple, short message or passage; add and subtract three-figure sums; multiply two-figure sums; and divide by one figure.

Level IV: A person who continuously uses the acquired literacy skills. Such a person should have qualified for Level III above and also should be able to read and write messages; read newspapers; keep up with current happenings and obtain information; read *How to do it yourself* books or short books on better living, food, ways of farming, and so forth; keep records; and solve simple arithmetic problems. He or she should also be able to keep a simple book of accounts on income and expenditure.

Participants who achieve Levels III and IV in the National Literacy Tests are considered to be literate, and they proceed to postliteracy classes. Those who do not achieve these levels continue attending literacy classes until the next testing period. These tests have revealed that illiteracy rates in the country as shown on Table 1 have dropped from 69% in 1967 to 9.6% in 1986.

TABLE 1
Literacy Rates in Tanzania 1967-1986

Year	Percentage of Illiterates		
	Male	Female	Total
1967	56	80	69
1975	34	44	39
1977	21	33	27
1981	15	27	21
1983	10	21	15
1986	7.1	12	9.6

Table 2 indicates the number of people sitting for the National Literacy Tests and those achieving Levels III and IV to be considered literate.

The proportion of women sitting for the Test and attending literacy classes is higher than for men, and this proportion is increasing. The data indicate, however, that the proportion of men graduating from the literacy classes and reaching Levels III and IV is always higher than for women.

Apart from the gender differences that exist in the illiteracy rates, there are regional differences as well. On the whole, illiteracy rates are lower in the coastal and richer inland areas and higher in the poor inland areas. Despite the regional differences in the rates of illiteracy, nearly two thirds of the illiterates in all the regions are females.

Those completing Levels III and IV advance to postliteracy classes. These classes are held in the same centers where literacy classes are held, that is, in primary and secondary schools, and they are conducted by the teachers therein.

Folk Development Colleges (FDCs)

The Folk Development Colleges Program was launched in 1975. It is intended to give graduates of literacy classes the opportunity to acquire further knowledge and skills. The colleges, which were modeled on the Swedish Folk High Schools, offer courses for village leaders (chairpersons, secretaries, bookkeepers, and village shop managers); leaders of women's organizations, household activities, and small scale industries; various groups engaged in implementing various self-reliance projects; and assistant field officers.

In practice, most of the students attending FDCs are those who have reached literacy skill Level IV and those who have completed seven years of primary education. Village leaders are responsible for the selection of the students. Two types of courses are offered. Core courses include agriculture,

technical education, domestic science, and accountancy. Optional courses include political education, economics, culture, and philosophy of adult education. Length of courses vary between those less than six months to those nine months or longer. By 1986, there were 24,186 students enrolled in 52 FDCs staffed by 420 tutors, half of whom had some teacher training.

Swedish interest in the development and operation of the FDCs has been high. The initial planning was assisted by consultants from Sweden, and in the early stages tutors were provided. Sweden has also been providing funds to run these colleges. In 1975-1976 its contribution was four times that of the Tanzanian government, whereas in 1985-1986 it was only one sixth of the Tanzanian provision.

Correspondence Education

Two institutions in the country offer correspondence education. One is the National Correspondence Institute (NCI), a department within the Institute of Adult Education based in Dar es Salaam with branches in all the regions of the country. NCI offers courses in four areas: mass education; secondary education; professional studies including teacher training, management, and administration; and a special program for disabled students. Mass education, which includes primary education, is open to those who have achieved literary skill Level IV. Other courses are offered to those who have completed primary or higher education. Enrollments peaked at about 7,000 in the mid-1970s and are now around 2,500. Far fewer women than men have enrolled in correspondence classes, and most of those enrolled are from urban areas and have completed primary education.

The other institution responsible for correspondence education is the Cooperative Education Center (CEC), a sister institution of the Cooperative College Moshi. The CEC was established in 1964 to carry out cooperative field extension education for the staff and members of the cooperative movement. The CEC conducts both residential and nonresidential courses. The nonresidential courses include the following types of correspondence courses: (a) leadership and supervision for Primary Cooperative Societies (both English and Kiswahili); (b) elementary bookkeeping (English and Kiswahili); (c) duties of the Committee (Kiswahili); (d) bookkeeping of Consumer Cooperative Society (English and Kiswahili); and (e) basic economy (Kiswahili). There are no courses on the politics of the cooperative movement. Courses offered concentrate on improving the organization of the cooperatives and increasing the output from the agricultural sector.

National Educational Campaigns

Over the years, the Institute of Adult Education, in collaboration with other government departments, has carried out nationwide campaigns through mass media, seminars, and workshops on specific issues. Among these campaigns were To Plan is to Choose (1969) aimed at informing citizens about the importance of the Second Five Year Development Plan (1969-1974); The Choice is Yours (1970) stressing the meaning, importance, and procedures of the forthcoming election; Man is Health (1973) designed to improve the health of Tanzanians by explaining the symptoms of prevalent

diseases and ways of preventing them. Each of these campaigns made extensive use of radio programs and study groups. Other campaigns included Time of Rejoicing (1971) on celebrating 10 years of independence; Food is Life (1975) on the importance of a balanced diet; and Forest is Wealth (1981) on the significance of preserving forests.

Programs for Women

The Institute of Education has a section that deals with issues that specifically concern women. It initiates and supports projects and produces reading materials for the newly-literate women. Typical of the pamphlets produced are those entitled *Sewing Techniques*, *Rights of Women*, *Women's Voice*, and *Manual for Milling Machine*. The section also holds seminars and workshops for women in collaboration with other relevant organizations. The section is funded mainly by a donation from the Norwegian Aid Agency (NORAD).

Workers' Education

In 1973, the Prime Minister's Office issued a directive calling on all factories, government offices, and parastatal institutions to establish programs in workers' education. Most complied and now offer a variety of programs including literacy and postliteracy classes.

Conclusion

Tanzania has shown that, given a committed leadership, a country with limited resources can mount and sustain socially significant projects. The Tanzanian experience also reveals certain shortcomings.

Tanzania's commitment to eliminating illiteracy was part of a policy first initiated in 1967 with the goal of transforming Tanzania into a socialist society. It was realized that to facilitate a socialist transformation, a literate and committed population that understood the party policies was essential. Education aimed at creating a new person and ensuring popular participation in the transformation efforts. As such, adult education was seen as a political activity. However, this essentially political activity was given to the Ministry of Education to be implemented. Ministries operate bureaucratically, and often the implementation of adult education has taken on a bureaucratic form. The adult education programs have been implemented through top down decision making. Decisions on how and what to teach are made centrally by the directorate of adult education in the Ministry of Education. This has precluded the involvement of the general population from determining their needs and how best to meet them. Bureaucratic implementation has stripped the programs of much of their political content and hence their effectiveness.

Analysis of the content in the adult education program reveals that it is geared more toward improving the production of export crops than toward making adults socially and politically conscious.

Making adult education a responsibility of the Ministry of Education had another effect. The Ministry has used its facilities and personnel to implement these programs. For literacy classes it has meant using primary

schools and primary school teachers. These teachers have been trained to teach primary school pupils; they have had no training in teaching adults. As a result, they basically use the same methods for teaching adults as they do for teaching primary school pupils. They also implement functional literacy programs. Thus a teacher who has never been a farmer has the responsibility of teaching a farmer how to grow cotton better. This creates problems as the language, interests, and cultures of these two groups differ and result in teaching functional literacy as if it were another classroom subject. Functional literacy should be implemented by those who are successful and have expertise in the particular production activity. Primary school teachers cannot be expected to be experts in agriculture, health, commerce, and so on.

Similarly, the National Literacy Test evaluates the reading and writing skills of individuals. The application of the skills learned on farms or in workshops is not able to be evaluated, and hence a different system of evaluation is needed for functional literacy programs.

During the planning of the adult education program, Folk Development Colleges were seen as institutions where newly literate adults could upgrade their skills. In reality, however, these colleges have been one more avenue for primary school leavers to pursue further education. This leaves few avenues for graduates of literacy classes to pursue further education.

Despite the problems discussed above, Tanzanian efforts at educating its adults and eradicating illiteracy have been commendable. It is one of the few countries in the Third World that has managed to reduce the illiteracy rates so significantly. Tanzania has kept a commitment, based on political will, to develop adult education in the context of socialist transformation.

References

- Buell, R.L. (1965). *The native problem in Africa*. Handeni: Anchor Books.
- Mpogolo, Z.J. (1986). Strategies and techniques adopted: The Tanzanian approach towards post-literacy. In J. Muller (Ed.), *Learning strategies for post-literacy: The Tanzania approach* (pp. 103-166). Bonn: German Foundation for International Development.
- Nyerere, J.K. (1967). *Arusha Declaration*. London: Oxford University Press.

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An Analytical Framework for Adult Education in Alberta¹

Little theorizing about adult education is apparent in Canada. This article proposes a modest theoretical framework for a sociology of adult education in Alberta including a discussion of the state, social reproduction, and elements of the political economy. Academic and skill upgrading programs in the province are briefly described, and a research prospectus inspired by critical theory is suggested.

The objective of this article is twofold. The first part provides a sociological framework for the study of adult education. A focus on the relationships between adult education and the state administered reproduction of social relations is provided including some comments on policy rationales. At a theoretical level, some concepts from the political economy of schooling are applied to aid understanding of the relationships between adult education and capital accumulation in industrial societies. The second part identifies the policy orientation of adult education programs and services in Alberta.² A brief description of academic and skill training activities is given. Finally, by way of conclusion, a short comment about a research prospectus is included.

Fundamentals for a Framework

Three main sociological themes are often related to the discussion of education's role in capitalist societies: social order, social control, and social reproduction. For social theory, the explanation of order and cohesion in a society is a fundamental concern.³ Three approaches have been identified: the utilitarian approach, the cultural approach, and the compulsion approach. From the perspective of utilitarianism, it is the self-interest of individuals, particularly in complex societies with highly sophisticated division of labor, that accounts for the maintenance of order and control. From the perspective of the cultural approach, the role of shared values and norms is emphasized in building and sustaining societal consensus as a prerequisite to achieve stability and social order in industrial societies. Finally, the compulsion approach emphasizes the issues of power and domination as the central concepts in explaining the constitution and reproduction of societies, as well as the capacity of the ruling classes or groups in achieving or enforcing the social order and establishing a consistent network of social control (Abercrombie, Hill, & Turner, 1986, p. 197).

A basic trait in contemporary social research is the analysis of education as part of the state administered reproduction of fundamental social rela-

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tions (Broady, 1981; Torres, in press). As I have discussed elsewhere, the notion of social reproduction (a) presupposes theories of society as a complex totality which develops through contradictions; (b) takes relatively complex societies as its object of inquiry within which formal and specialized educational institutions play a significant role; (c) argues that these educational institutions constitute strategic sites for the stability and further development of these societies; (d) studies the relations of mutual interaction between these institutions and the larger society which provide the basis for sociologies of education; (e) suggests that policy formulation with the educational sphere constitutes a crucial context of negotiation and struggle which may have decisive effects on the capacity of society to maintain or transform itself, hence educational settings are a microscopic representation of the larger macroscopic societal dynamics; and (f) paradoxically, education is considered either a powerful tool for socialization into a given social order, or a challenge and resistance of a hegemonic culture or social practice. In short, theories of social reproduction in education are linked with power, race, gender, class, knowledge, and the moral bases of cultural production and acquisition (Morrow & Torres, 1988).

Although “the majority of sociologists argue that social control is achieved through a combination of compliance, coercion and commitment to social values” (Abercrombie, Hill, & Turner, 1986, p. 195), the compulsion approach to social reproduction has received the most attention. Baldus (1977) has identified three basic assumptions underlying the approach. The first is

that a class structure exists in capitalist societies which is based on the private ownership of productive capital, and that the accumulation of capital is the highest-order objective of the capital-owning class in such societies.... The interest of these groups in maintaining and expanding their property base and in maximizing their profits affects, directly or indirectly, virtually every member of capitalist societies. (p. 249)

The second assumption is that “the pursuit of dominant class objectives in any social system requires measures to manage and reduce complexity, both with respect to the choices of objectives, and with respect to the selection of means under a given objective” (p. 250). The reduction of complexity is

an essential element of the process by which a dominant class maintains social control over a periphery.... Here, complexity can become a problem either because the means requirements themselves become increasingly numerous and differentiated, or because the periphery as an environment from which means are selected becomes increasingly diverse. A growth in the complexity of means requirements or means environment, or both, makes the task of connecting dominant class interests and the periphery behaviour which is needed to realise these interests more difficult. Finding a way of reducing this complexity can become crucial for the survival of a dominant class. (p. 250)

Baldus’ third assumption is that social control can be designed either by a strategy of *interventive control* which “comprises all efforts by the dominant class or by institutions acting on its behalf to create needed periphery behaviour through the use of persuasion or coercion,” and/or by resorting to *complementary peripheral behavior strategies* using the “al-

ready existing conditions in the periphery which are not the intended result of a prior control initiative by the dominant class, but are complementary to its interests" (p. 250).

This is not the place to criticize the main assumptions of Baldus' (1977) strategy of analysis which mirrors a particular type of class perspective with functionalist overtones.⁴ However, to clarify subsequent discussion, three critical comments are in order. First, the simplistic distinction between a ruling class (elite) and a periphery (the rest of us) may not hold true when analyzing the class structure and the political behavior of groups and classes in capitalist societies. Second, the notion of a unified ruling elite overlooks the fact that there are documented clashes and contradictions between ruling classes in each society due to their regional locations (i.e., East versus West in Canadian politics), their distinct factional ideologies or political affiliations (i.e., Conservatives versus Liberals), or their different and sometimes opposing economic interest (i.e., the military-industrial complex in advanced capitalism versus other lobbies). Third, according to Baldus, the strategy of interventive control is essentially executed by the capitalist state which intervenes actively in establishing the patterns of social control. Even when the "choice of control strategies shifts increasingly from the use of interventive control to the systematic use of complementary periphery behavior" (p. 255), it is the state administering interventive control, or the massive intervention of multinational corporations in politics, that represent forms of intervention of the capitalist dominant classes. Hence the state is mostly the representative of a given class, and most of its interventions will be conducted on behalf of this class and will have purposes of social control. At this point, Baldus' use of the notion of social control becomes mechanistic and eventually conspiratory. The state loses its complexity, becoming a ruling machinery on behalf of a given class which is self-conscious and unified, with clear and precise goals.

What should be retained from the brief critique is a key proposition. From the perspective of a critical sociology of education, any educational activity plays a central role in the process of social reproduction of the social order. Although education may be connected either to interventive strategies of social control or complementary peripheral behavior strategies, it will be the role attributed to the state in the overall reproduction of capitalist societies, and the definition of the structural character of the state, that will help in clarifying the role of public education in the constitution and reproduction of the social order.

Accordingly, the definition of the state is central to understanding social reproduction and the role of education (Carnoy, 1984; Pannu, 1988; Torres, in press; Welton, 1987). The concept of the state has become a fashionable term in political science. Many authors refer to political authority and policy making as the role of the government or the public sector, and some are inclined to use a more comprehensive notion such as the political system rather than the state.

I would like to use the notion of the state first, as a reaction to the liberal-pluralist political approaches rooted in utilitarian perceptions of

politics and operative within a "stateless" theoretical framework. This approach viewed politics as the realm of activities of autonomous individuals exercising private choices or, in its most critical versions, a terrain for negotiation between power and interest groups (including bureaucracies). But public policies were never conceived as representing any single set of global purposes or unified dominant rationales. Second, I will use the term to highlight the role of the state in policy making with purposeful and relatively independent action, while at the same time the state is a terrain where public policy is negotiated or fought over (Torres, in press).

At the highest level of abstraction, I propose to consider the state as a pact of domination and as a self-regulating administrative system. The notion of domination is a fundamental concept of sociology which has been developed particularly in the work of Max Weber and Georg Simmel (Clegg, 1975). It relates to power which can be defined as "the probability that an actor within a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests" (Weber, 1947, p. 152). There are in the classic Weberian literature three types or modes that exercise this power as domination: traditional domination, charismatic domination, and legal-rational domination. The last mode is intimately linked with the origin of modern bureaucracy and seems to prevail in the operation of the modern capitalist states.

Following Cardoso (1979), I consider the state "the basic pact of domination that exists among social classes or fractions of dominant classes and the norms which guarantee their dominance over the subordinate strata" (p. 38). Similarly, Offe (1974) conceptualizes state-organized governance as a selective, event-generating system of rules, that is, a sorting process (p. 37). Offe views the state as comprising the institutional apparatus, bureaucratic organization, and formal and informal codes which constitute and represent the "public" and "private" spheres of social life. The primary focus, then, is neither the interpersonal relations of various elites (as Baldus seems to suggest) nor the decision making process (as the conventional literature on public administration seems to portray).⁵ Therefore, the class character of the state resides not in the social origin of the policy makers, state managers, bureaucracy, or the ruling class, but in the internal structure of the state apparatus itself and the selectivity of public policy—a selectivity that is "built into the system of political institutions" (Offe, 1974, p. 37; Torres, in press).

In a recent and important contribution on adult education in Canada, Welton (1987) has captured the importance of the state and its class selectivity in understanding adult education:

We seldom reflect critically [on] the role of the state in the management of adult learning. To focus this theme, we note that the capitalist state plays three fundamental roles in societal and cultural reproduction: it aids in the capital accumulation process (the accumulative function); it maintains law and order (the coercive function); and it assists in legitimating the rule of the dominant class, or class fractions, through managing societal learning processes (the knowledge legitimating function). While the third function, that of legitimation, is central to our discussion of adult learning, the other two forms obviously interweave with that of the legitimation func-

tion, and impinge in their own way on the practical learning of adults. Here we enter the under-theorized realm of adult education and public policy. (p. 13)

A premise shared by Welton and many other analysts is that the study of adult education policies and programs has been neglected in contemporary sociology of education in favor of research concentrating on schooling and formal education issues (Jarvis, 1985; Thompson, 1980). Indeed, the book edited by Welton (1987), *Knowledge for the People*, is built on the basic argument that

Adult learning is more central to societal reproduction, resistance, and transformation than that of the children. Resistance to and transformation of societal structures emerges from the adult population, and is premised upon men and women's ability to learn new ways of seeing the world and acting within it. In our restriction of educational discourse to inter-generational transmission we have failed to understand the most powerful "education" mechanisms operating within the social order. We ought to think of all the society as a vast school and begin to understand how autonomous learning emerges or is blocked and distorted within our political economy. (p. 7)

This is a provocative statement. It reproves mainstream and critical research in sociology of education for focusing on the study of schooling and for failing to understand the contribution of educational practices to reproduction, resistance, or social transformation.⁶ Moreover, the reconstructivist perspective of Welton accords with that of the pedagogues of liberation (e.g., Freire) who argue that autonomous adult learning is fundamental to the process of social change because it enhances new ways of seeing the world and acting within it.

What *Knowledge for the People* (Welton, 1987) promotes is an understanding of adult education as a social movement in industrialized societies by relating adult education practices and institutions to their critical historical origins. The book also challenges the paternalist mode of adult education discourse that seems dominant in the adult education field in Canada. Similar themes from different perspectives are to be found in Kozol's *Illiterate America* (1985) and in Youngman's *Adult Education and Socialist Pedagogy* (1986).

Another important proposition emerges from this analysis. Despite the difficulties of defining adult education as a field of study and the existence of a number of initiatives in the private sector, it seems reasonable to claim that adult education as an activity mandated, sponsored, supervised, and certified by the state is as much an apparatus⁷ of the state as any other state agency. The validity of this claim is apparent in regard to academic upgrading, skill upgrading, or vocational adult education programs conducted by institutions operating with federal and provincial government financial support in Canada. Some of the implications of this proposition become clearer in the next section.

Correspondence/Contradiction

The reproduction of capitalist society is related to the reproduction of social forces and the reproduction of the relations of production. The latter is carried out in two complementary ways, first through the qualification and determination of the social agents and, second, through the distribution of

agents in preexisting positions in the labor market (Poulantzas, 1969, p. 32). This process involves the production and reproduction of work habits such as punctuality, obedience, respect for authority, self-initiative, and sense of personal responsibility (Bowles, Gintis, & Meyer, 1975), the sharpening of concrete cognitive skills of workers, the provision of general knowledge and learning skills necessary to sustain the complex technocratic framework of modern production, and ultimately the production and diffusion of class consciousness.

A recent analysis points out that such efforts to achieve *correspondence* between the production and diffusion of knowledge and capitalist social relations coexist with several sources of *contradictions* in the educational system (Carnoy & Levin, 1985). Carnoy and Levin have identified five main sources of contradictions in the school system: (a) the school as a promoter of political ideology (when education in liberal societies is supposed to be neutral and apolitical but operates under the assumption that it should create citizens for liberal democracies); (b) the school as an agent of social equality (while many societal dynamics and institutions move in the opposite direction); (c) the school as an agent of social mobility (while educational credentials are no longer a passport to better paid, highly prestigious jobs for all graduates); (d) the school as an institution of cultural development (while the bulk of the creation and diffusion of knowledge and culture may be now taking place outside the walls of educational institutions); and (e) the relative independence of the educational bureaucracy from the capitalist enterprise (different professional cultures and opposing corporate interests make it difficult to always adjust education output to the needs and requirements of labor markets and capitalist enterprises).

In addition, the so-called correspondence principle (i.e., the correspondence between the social relations of production and the social relations of education) is neither perfect nor complete. First, there are structural or internal contradictions in the schooling system itself (e.g., conflict and clashes between different factions of the bureaucracy, either on professional or political grounds, that make it impossible to establish educational policies and practices that always suit the needs of the dominant classes). Second, because the educational system is a place of work for teachers and administrators, periodic struggles over wages and working conditions tend to reflect the fundamental conflict between wage labor and capital/ownership in capitalist societies. Third, the expectation that the schools are to produce socialized labor and the middle-class perceptions and behavior of most school workers creates barriers to changes in practice advanced by students from the working class or minorities who are searching for alternative social arrangements and political frameworks.

In the political economy of education, this notion of correspondence-contradiction is used as a heuristic device to understand the role and functions of education in capital accumulation. A number of questions emerge from theoretical explorations in the political economy of schooling that could also be posed for adult education. Does education contribute to increased output, or does it allocate people to jobs with higher training requirements, produc-

tivity, and earning potential? Does education legitimize an unequal social structure and thereby contribute to higher output and acceptance of unequal work roles? Or, instead, does education contribute to lower output through legitimizing a profit-making pattern of development (hence capital accumulation) that is less than optimal for a particular society?

Few studies deal with the political economy of adult education. However, some inferences may be drawn from research on schooling, income, and labor markets to illustrate the limitations that adult education policies face. First, available evidence suggests that the wage structure depends on variables exogenous to individual productivity. These variables include gender, race, the nature of a firm's market for goods, maintenance of class structure in the face of meritocratic rules, degree of monopoly power in the market, and/or social class background (Carnoy, 1977; Carnoy, Lobo, Toledo, & Velloso, 1979). Thus differential rates of return to education result not from inequality in the distribution of schooling, but from the basic inequality structures of commodity production societies (Bowles, 1975, 1980; Carnoy, 1975; Levin, 1980). Second, the role of the state in education and income policy is a crucial variable in determining income distribution. In this sense, taxation, wage fixing, price control, inflation, and employment policies are the means by which the state exercises its power—and all of these are policies that are beyond the reach of adult education programs. Third, a decisive standpoint from which to study the relationships between education, income distribution, and capital accumulation is the theory of labor market segmentation. According to this theory, labor market conditions can be understood as outcomes of four segmentation processes: (a) segmentation into primary and secondary markets, (b) segmentation within the primary sector, (c) segmentation by race, and (d) segmentation by gender. The primary and secondary segments are differentiated as follows. Primary jobs are considered those that require and develop stable working habits, and skills are often acquired on the job. Generally, wages are high and job ladders exist. In contrast, secondary jobs do not require and sometimes discourage stable working habits. Wages are low, job ladders are few, and job turnover is high. Secondary jobs are mainly filled by minority workers, youth, and women (Reich, Gordon, & Edwards, 1975). Further fragmentation of labor markets seems likely as new labor segments emerge between and within commercial and industrial firms.

Deskilling

Consideration of the role of education in capital accumulation should be complemented by consideration of the role of educational policies in capitalist development in industrial societies. It is contended that a process of deskilling of the labor force is under way in the workplace due mainly to the increasing complexity of industrial production, the simplification of tasks (Taylorism), the continued growth of a reserve army of unemployed (Pannu, 1988; Therborn, 1980) or the increasing of employment in the personal service sector that requires no particular expertise (e.g., fast food outlets, retail stores).

Simultaneously, this deskilling process contributes to lowering real wages and to increasing owner control (through hiring practices) over the social relations of production in the work place. Consequently, it undermines workers' control over the labor process, further disorganizes and segments the working class, and inhibits their political development. Noting the historical shift from a process of skilling toward a process of deskilling, Braverman (1974) argues that the use-value of the labor force has been incremented while the exchange-value is decremented in contemporary capitalism.

In this regard, several features of the present conditions of industrial production affect those means like adult education which might enhance workers' opportunities, occupational mobility, or progressive income distribution. There is a devaluation of the labor force price because of advances in science and technology and a growing marginalization of a reserve army of underemployed, reducing their chances to be cyclically employed or to return to their previous market segment. There is a progressive shift of people from the primary segment to the secondary one. The decision making process is increasingly monopolized by large corporations and public bureaucracies, thereby reducing the accountability of politics to the common citizen. In addition, there is a restructuring of the world capitalist economy which entails the circulation of a low-cost labor force through international migration among industrial settings.

Patronizing adult education (as it has been labeled by Welton, 1987) aids in skilling and deskilling the labor force. For instance, English as a second language programs tend to adapt immigrants to perform better in the social structure, without offering them a critical understanding of the mechanisms of domination incorporated in the language, or without provoking critical reflection about the structural characteristics of the marketplace into which they will be fitted, usually in low-paying jobs rejected by Canadians. Vocational education programs may be shifting people out of primary labor markets into secondary ones, while promising an economic future marked by job advancement and stability. Such programs might merely help individuals improve their chances to enter lock-step occupations. Moreover, much of the training for jobs and on-the-job training is geared to preparation for work in the formal markets of the economy (either primary or secondary) and fails to take cognizance of the growing phenomenon of nonformal, underground labor markets in capitalism including a sizable number of self-employment strategies.

In summary, adult education policies and programs tend to accept some premises that may not stand up to careful scrutiny from the perspective of the political economy of adult education. The relationships between productivity and education on which many of the manpower programs are based may be less strong than the relationships between earnings and education or schooling (Carnoy, Lobo, Toledo, & Velloso, 1979; Morales-Gómez, 1981). The structure of earnings is neither determined by, nor even necessarily tied to, the distribution of production. The connection between workers' characteristics and wages is not merely economic, but tends to be

socioinstitutional—which may explain why, despite several training programs developed for Native Canadians in the North, the best jobs even in the Native communities are often held by non-Natives and whites (Carney, 1988). The difference between earnings and productivity among secondary workers, who have the lowest levels of education, may be greater than for primary independent workers. More training or adult education courses may not reduce this difference which is rooted in job descriptions, occupational categories, and the perception of job status by the employers.

Thus a fundamental question to be addressed in the planning of an adult education program is: Who is benefiting most from the adult education programs sponsored by the state—the unemployed adult learner and the adult learner employed in the secondary markets of the economy, or the administrators and instructors who have established their growing labor markets in adult education institutions and the state itself? Without a clear understanding of the contributions of adult education to economic development, job creation, job placement, social mobility and the like, it will not be easy to answer this question. In the meantime, many different rationales for adult education policy formation will persist.

Policy Rationalities

There is always an underlying political rationale in adult education policy formation.⁸ Moreover, educational policy is always formulated through a complex process of political bargaining between different interest groups (Kozma, 1985, pp. 347-360). The dominant rationale advanced by public officials, when they are asked to explain new policies in adult education or the creation of a given set of programs, usually involves one or a combination of the following arguments: (a) they are the state's response to explicit social needs and demands expressed by the adults themselves or required by society that are customarily channeled through institutions of social representation such as political parties, churches, or civic organizations; and/or (b) they represent the implementation of a constitutional mandate of the state to supply education for adult citizens and thereby enhance educational opportunities for everyone as part of the welfare mission; and/or (c) they are an integral element in the state's strategy in solving social problems such as poverty, unemployment, marginality, and the like; and/or (d) as an educational investment, they reflect the economic strategy of the state and are intended to provide training or retraining to help individuals get jobs or cope with the changes in the labor market and the occupational structure of the society.

I have argued elsewhere that a number of the assumptions on which these widely accepted rationalities are built are simply misleading (Torres & Unsicker, 1987). If this is so, then the aforementioned rationales are simply rhetoric produced in an attempt to justify investment and policy planning in adult education—often with little information about client needs or the economic, social, and cultural returns. Furthermore, as is elaborated later, most of the policy research in adult education and literacy training lacks a critical theory of the social functions of adult education in development and

of the role of the state in education, and by implication it reflects the wishful thinking and guesswork expressed in policy rationales.

Another policy rationale that is seldom recognized and rarely acknowledged by policy makers is that adult education programs often originate with a bureaucratic decision to expand the system to ameliorate inter-bureaucratic conflicts or struggles between different interest groups. This kind of rationale is a manifestation of what has been termed "a law of development of the bureaucracy" (Offe, 1984, p. 105). This so-called law could be useful in explaining public policy in adult education, especially in states with a strong emphasis on social welfare policy (Torres & Unsicker, 1987).

Policy Orientation of Adult Education in Alberta

Understanding of the policy orientation in Alberta is aided by comparing the formal (schooling) system and nonformal education programs⁹ in Alberta. The Province of Alberta in 1987 had an estimated population of 2,427,600 inhabitants. In terms of age groups, 61% of the population is 25 years of age and older—an aging population because one out of four Albertans is older than 45 years of age. In the academic year of 1985-1986 the formal educational system served a population of 31,437 pre-elementary students, 290,757 students in grades 1-8, and 144,809 students in grade 9 and higher, with 25,237 teachers working full time in all three levels of schooling.

While the resources and services offered to the formal education system are relatively well developed and the object of considerable research, those in the area of nonformal education are not. Thus the scope and performance of adult education services are somewhat more enigmatic.

This is evident in the illiteracy phenomenon. The controversial *Literacy in Canada: A Research Report* (1987) claims that one out of six working Canadians is illiterate. It also observes that the incidence of illiteracy generally increases from east to west. It is highest in Quebec and Newfoundland, and lowest in British Columbia and Alberta. However, a closer examination using the definition proposed in *Literacy in Canada* reveals that the rate of basic illiteracy in Alberta is exactly the same as the national average (8% of the total adult population 18 years of age and older), while Alberta's 13% rate of functional illiteracy is slightly below the Canadian average (16%). With its 21% of total illiteracy, Alberta ranks third nationally after British Columbia (17%) and Manitoba/Saskatchewan (19%).

This implies that there are approximately 360,000 illiterates in the province, a number only slightly less than the total enrollment in the formal education system. In other words, while about 18% of the total population in Alberta is attending schools (from elementary to postsecondary), 15% of the total adult education population is either basically or functionally illiterate.¹⁰ It seems reasonable to assume that the majority of this population is not attending adult education programs. Furthermore, if we consider those people that might be considered "marginal illiterates" (Kozol, 1985), and if we critically assess the education of Native people (Carney, 1988), the

complexity, magnitude, and diversity of potential demands for nonformal education in Alberta become readily apparent.

This situation alone calls for a comprehensive critical review and analysis of adult education services, programs, and policies in the province in terms of conventional cost-benefit analysis; cost-effectiveness analysis; or studies of the socialization and social mobility functions, the selection and recruitment functions, and the exchange value of nonformal education programs (Bock & Papagiannis, 1983). Such an assessment is, however, well beyond the possibilities and intentions of this article.

A salient feature of government policy in Alberta, as in the rest of Canada, has been the shift from a social demand approach to a supply side approach in the planning and provision of adult basic education. The causes and implications of this shift are succinctly analyzed in Pannu (1988). Several provincial government departments share responsibility for adult basic education (ABE) provision: Alberta Advanced Education, Career Development and Employment (formally Alberta Manpower), and Alberta Education. The ABE Discussion Paper (1985) confirms that the development of ABE provisions under these departments has been characterized by one of two orientations—a *manpower* orientation (supply side approach) concerned primarily with enabling individuals to participate in the labor force through exchanges in the market by “upgrading” the value of their labor, or a *human development* (social demand) orientation concerned with enabling all individuals to participate as fully as possible in all aspects of life in the society, thereby improving the labor and capital resources in communities.

ABE provision through Career Development and Employment and under Advanced Education Field Services Division has reflected a manpower orientation focused on helping disadvantaged adults participate in and contribute to the economic life of the province. Provision of ABE has been considered a way to reduce socioeconomic inequities; through improved educational opportunities, disadvantaged adults would be better able to enter the labor force in a manner similar to that enjoyed by citizens generally. By contrast, provision under Alberta Advanced Education community Programs Branch (formerly Further Education Services and Adult Learning Support) and Alberta Education is rooted in the view that ABE should assist adults to live their lives more fully as well as helping them to become self-supporting, productive contributors to society. Some of the pitfalls of the prevailing human capital orientation can be deduced from experiences elsewhere (Bock & Papagiannis, 1983; La Belle, 1988).

Academic Upgrading

These policy orientations find expression in a number of provincial programs and regional/local services aimed at academic upgrading. A few illustrations follow.

The Community Programs Branch (CPB) provides grants to support noncredit adult education courses offered by agencies that are members of Further Education Councils. There are 85 Further Education Councils with

a membership of 1,717 agencies, organizations, institutions, and programming volunteers throughout the province. The funds received by these Councils may be used to offer adult basic literacy courses designed to upgrade the academic skills of adult students to the equivalent of grade 9 competence. However, relatively few literacy courses have been provided. Until recently, the Further Education Councils seemed unaware that such instruction might be needed in their communities. To heighten awareness of community literacy needs, CFB, in collaboration with the ACCESS Network (formerly ACCESS Alberta), undertook a publicity campaign using electronic media. Special project funding was supplied to assist in this endeavor. Most of the programs developed employ a coordinator who engages volunteer tutors to work on a one-to-one basis with adults. Currently, the Branch funds approximately 30 projects which operate in 40 communities.

Additionally, CBP provides grants and textbooks for ESL instruction and distributes *English Express*, a monthly newspaper for adults learning to read English (circulation 8,000). A total of 1,612 courses in ESL or French as a second language were supported in 1985.

The Adult Basic Education Project (ABE Project) is a cooperative effort between the Alberta Vocational Centres (AVC), Community Vocational Centres (CVC), and the Field Services Division of Advanced Education. The Project goals are (a) to provide a forum for discussion among ABE educators, (b) to establish a network for sharing experiences and materials, and (c) to focus on the development of curriculum materials for use in ABE settings. The materials developed through this project focus on the skills deemed necessary for an adult to live successfully in Alberta.

The Career Development and Employment Department offers three main services: (a) career planning for adults (in groups or individual settings) to help choose an occupation, prepare for a job search, and/or plan for further education; (b) advice about obtaining financial assistance; and (c) a consulting service to other agencies to assist them in incorporating career planning into their programs.

At the local level, the Edmonton Association of Continuing Education and Recreation—Literacy Subcommittee coordinates the efforts of a number of institutions and agencies in the Edmonton area involved in literacy. The goals and objectives of the committee are (a) to communicate and share information with individuals and representatives of groups, agencies, institutions, and government departments concerned with adult literacy; (b) to identify and record needs for adult literacy programs and determine if and how the needs can be addressed by the committee; and (c) to take appropriate action to promote public awareness of adult literacy.

Another example of a local initiative with a different orientation is the Boyle Street Co-op, whose counselors provide information and assistance to people requiring food and/or housing and make referrals to academic upgrading programs. A Learning Centre housed in the Co-op but sponsored by Edmonton Public School Board offers a drop-in literacy teaching service. The School Board also offers the Prospects Literacy Program which accepts any students not attending school. The enrollment is usually between 80

and 100 pairs—a pair consists of a student and a tutor. Students and tutors meet in public library branches, homes, or other locations throughout the city.

Regarding education for immigrants, the Edmonton Immigrant Services Association encourages and improves the use of English among non-English speaking immigrants and refugees through small discussion groups. Similarly, the Catholic Social Services' English Language Assessment and Vocational Counselling Service provides several services including ESL assessment and referral, career counseling, financial assistance information, multilingual interpreter services, follow-up contact with clients, and a program to help adult immigrants obtain the equivalent of a high school diploma.

Illustrative of distance education efforts is the Alberta Correspondence School which offers adult upgrading courses at both the junior and senior high school levels. Also, there is the Journeyworkers program available over the ACCESS network, designed to meet the needs of tutors in adult literacy by providing them with video and print instructional materials.

Skill Upgrading

A wide variety of skill upgrading services are available throughout the province, most of which are funded by the provincial and federal governments. At the provincial level, the Career Development and Employment Department coordinates four major initiatives. One is the Alberta Training Program which provides financial support to employers for the training and retraining of employees in medium and high skill occupations. The program also enables employers to retrain some of their employees, averting layoffs. During the 1985/86 fiscal year, 9,318 contracts were developed with 4,306 private sector employers, involving 14,968 trainees. A second is the National Instructional Training Program in which the province provides educational services while the Canadian government contracts to purchase a certain number of places in postsecondary institutions. The federal government reimburses the province for a portion of its costs, and supplies financial assistance directly to federally sponsored students in the form of training allowances or unemployment insurance funds. In 1985-86, there were 19,884 trainees of whom 12,125 were engaged in apprenticeship. The third is the Alberta Vocational Training program which provided skill training to 31,279 adults in 1985-86. The fourth is the Vocational Rehabilitation of Disabled Persons Program offering vocational counselling and training to disadvantaged and disabled adults. During 1985-86 it served 1,188 students.

The Canadian Jobs Strategy (CJS) is a federal government program which aims to provide opportunities for skill development in Canada, and is only partly related to ABE. It replaces former federally sponsored training and job creation programs across Canada. Within the framework of CJS are several programs with different options. Some examples are the skill investment program, extended training leave option, small business training op-

tion, training trust fund option, job entry program, job development, skill shortages program, innovations and community futures.

Ten community colleges, three institutes of technology, and about 100 privately operated vocational schools are engaged in delivering these programs. Additionally, there is a unique set of institutions known as the Alberta Vocational Centres (AVC) and the Community Vocational Centres (CVC). The AVCs are located in Edmonton, Calgary, Grouard, and Lac La Biche. They endeavor to provide a comprehensive range of adult education programs concentrating on adult basic education, skill training, and services responsive to local, regional, and provincial needs. Special emphasis is placed on providing training required to enable the underemployed and unemployed, and those who are socially, economically, geographically, educationally, physically, or mentally handicapped to participate in the social and economic development of the province.

The CVCs provide a variety of basic education programs and support services to 32 communities in north central Alberta. Other agencies serving the region include the North Peace Adult Education Consortium, Blue Quill School, and the Forest Technology School. Overall, the effort to extend adult education services to north central Alberta has been commendable. As one study concluded some years ago, the area

is generously endowed with institutional resources, having only 10 percent of the population of Alberta, yet [it has] 40 percent of its public colleges and 50 percent of its vocational centres. Excluding the two institutes of Technology in Edmonton and Calgary (NAIT and SAIT), 42% of all funds for provincially administered institutions were spent in the study area, which has only 28 percent of the student registration. (Northern Development, 1981, p. 27)

Research Prospectus

The great scope and diversity of adult education in Alberta is merely hinted at in the foregoing description of academic upgrading and skill training programs. The scale and complexity of the operation and the paucity of data about its effectiveness and efficiency give rise to the obligation and the opportunity for research to inform future policies and provisions.

When launching policy research and planning, it is important to remember that the supply side and social demand models reflect different conceptions of what the roles of the capitalist state are in capital accumulation and legitimation of the mode of production. A supply side model will attempt to downplay the intervention of the government in the economy, will sustain a drive toward privatization of education, training, and welfare activities, and will rely heavily on the autonomy and self-regulatory role of the markets. A social demand model will boost state intervention in the economy, enhancing expenditures in welfare activities including education and job creation policies, and will increasingly attempt to regulate the markets.

It is equally important to understand that capitalist education, like the capitalist state, has a *dual character*. On the one hand, capitalist education should provide the means to contribute to the reproduction of the capitalist system, either as a tool to enlarge capital accumulation and the reproduction of the labor force, or as an instrument able to enhance political domina-

tion structures, practices, and codes. On the other hand, in its legitimation role, education may embody basic notions of democracy and the civil society's demands on the state for greater social mobility, the attainment of higher personal skills with which to achieve better positions in the labor markets, and greater social, economic, and political justice. Adult education policies and practices may be reflecting even more dramatically this dual role.

For instance, from the perspective of political economy highlighted earlier in this article, it would be desirable to study supply side and social demand approaches to planning to ascertain their origins and impacts. Such study may also reveal the degree to which developments in Alberta are connected to worldwide shifts in the relationships between capital, labor, and the state, and the changes in the state itself (Pannu, 1988). Current concerns about literacy training in Canada might be illuminated as well.

From the perspective of sociology, the relationship of current offerings and social and job mobility ought to be investigated with particular reference to the attainments of those who participate in academic and skill upgrading programs.

From the perspective of participatory policy planning, the existing network of coordination requires identification and assessment which should then be followed by the testing of alternate means to overcome inadequacies in participation and to avoid unnecessary duplication in services and programs. Broadening the participatory base in planning may eventually lead to greater emphasis on adult education as an instrument for social change rather than as an agent of social regulation. Such an outcome would probably be especially beneficial for the Native population.

Finally, from the perspective of political science, the issue that merits attention is how to strengthen the link between adult education policies and practices, the achievement of a more enlightened citizenry, and the creation or recreation of democratic politics and economic democracy.

Notes

1. K. MacPhail, L. Larson, Z. Manzawe, M. Brown, K. Higgins, and V. Mlekwa collaborated in data collection. The author is grateful to M. Norton and W. Worth for their careful reading and constructive criticism of a previous version.
2. A simple classification of services may be the following: (a) services and programs oriented toward academic upgrading; (b) services and programs oriented toward skill upgrading and vocational education (including on-the-job training and training for jobs); (c) services and programs oriented toward cultural or social enjoyment (including programs for leisure activities and the use of free time); and (d) postsecondary education programs and institutions (including programs for certification or credential purposes, programs that are integral to the philosophy of continuing education, or programs and institutions that provide a second chance to learn for disadvantaged adults). In this article, only the first two categories or types of services are considered. The emphasis is on north central Alberta, particularly Edmonton.
3. The problem of social order is essential in discussing social integration. In political philosophy, Tocqueville, Hobbes, and Locke have all addressed the "problem of order," and they have encountered a fundamental dilemma: how to reconcile the "natural" (although for some writers, induced) self-interest of human beings with the "functional needs" of the society in an abstract but workable social arrangement. Two main solutions have been proposed, neither of them entirely satisfactory, namely the contractual

solution (the notion of a social pact) and the despotic solution (a coercive state) proposed by Hobbes (Baldus, 1977).

4. For a critical discussion of the intersections between class analysis, functionalist analysis, and systemic analysis in social theories concerned with the process of social reproduction, see Morrow and Torres, in press.
5. For a systematic discussion of the prevalent views in public administration, see Bates (1985).
6. An excellent discussion of the role of education in reproduction, resistance, and social transformation can be found in Aronowitz and Giroux (1986), and with a special reference to adult education, see the recent books by Freire (Freire & Macedo, 1987; Shor & Freire, 1986).
7. Taking into account the theoretical debates on theories of the state in the last two decades, I am not entirely satisfied with the term "state apparatuses," especially for its Althusserian connotations. In order to avoid a lengthy debate on terminology, I am using it here in a descriptive fashion. I would refer the reader for a more systematic discussion on this issue to my work with Morrow (in press) where we criticize what we have called the "closed perspectives" in social reproduction.
8. The notion of rationality is used as a theoretical construct, as a matrix of assumptions, theories, and empirical learning from previous experience that could become a guide for action. There is, however, an important difference between rationality and practice. Educational practices, like any social practice, should not be seen only as an outcome of structures or rationalities but as part of the overall dynamics of social interaction. Hence the relationship between a rationality and a given educational practice is similar to the relationship between language and conversation; the language structures the conversation in terms of syntax and grammar but will exert only a partial control over the content of the message (Bowles & Gintis, 1981).
9. The term nonformal education was introduced in the literature in the early '60s. One definition states that:

Nonformal education is generally seen as need-oriented ... utilitarian ... and cheaper than the formal systems. Often it is tied to some productive activity ... and is characterized by ... peer learning ... and flexibility. Students, if the word be retained, generally enroll in nonformal courses because they are interested in what can be learned—not because it counts for a degree ... and nonformal education does not engender elitist feelings among its students. (University of Massachusetts, 1971, cited by Bock & Papagiannis, 1983, p. 14)

A more systematic definition is provided by La Belle (1986) who views it as: "any organized, systematic educational activity carried on outside the framework of the formal system to provide selected types of learning to particular subgroups in the population, adults as well as children" (p. 2).
10. In light of these findings, several questions arise: Who are the illiterates? Where do they come from? Were they exposed to the education services in the province of Alberta, or is their illiteracy a legacy of some other condition such as immigration or a mother tongue other than English or French? These kinds of questions await investigation.

References

- Abercrombie, N., Hill, S., & Turner, B. (1986). *Dictionary of sociology*. Harmondsworth, England: Penguin Books.
- Adult basic education in Alberta. A discussion paper*. (1985, December). Further Education Services.
- Aronowitz, S., & Giroux, H. (1986). *Education under siege. The conservative, liberal and radical debate over schooling*. Amherst: Bergin & Garvey.
- Baldus, B. (1977). Social control in capitalist societies: An examination of the "problem of order" in liberal democracies. *Canadian Journal of Sociology*, 2(3), 247-262.
- Bates, R. (1985). *Public administration and the crisis of the state*. Victoria, Australia: Deakin University.
- Bock, J.C., & Papagiannis, G.J. (Eds.). (1983). *Nonformal education and national development*. New York: Praeger.
- Bowles, S. (1975). Unequal education and the reproduction of the social division of labor. In M. Carnoy (Ed.), *Schooling in a corporate society* (pp. 38-66). New York: McKay.

- Bowles, S. (1980). Education, class conflict, and uneven development. In J. Simmons (Ed.), *The educational dilemma: Policy issues for developing countries in the 1980s* (pp. 205-231). Oxford: Pergamon.
- Bowles, S., & Gintis, H. (1981). Education as a site of contradictions in the reproduction of the capital-labor relationships: Second thoughts on the "correspondence principle." *Economic and Industrial Democracy*, 2, 223-242.
- Bowles, S., Gintis, H., & Meyer, P. (1975, summer). The long shadow of work: Education, the family and the reproduction of the social division of labor. *Insurgent Sociologist*, 3-22.
- Braverman, H. (1974). *Labor and monopoly capital*. New York: Monthly Review Press.
- Broadly, D. (1981). Critique of the political economy of education: The Prokla approach. *Apropos of a tenth anniversary. Economic and Industrial Democracy*, 2, 141-189.
- Cardoso, F.H. (1979). On the characterization of authoritarian regimes in Latin America. In D. Collier (Ed.), *The new authoritarianism in Latin America*. Princeton: Princeton University Press.
- Carney, R.J. (1988). The adult education of Native people in Alberta. *Alberta Journal of Educational Research*, 34(3).
- Carnoy, M. (Ed.). (1975). *Schooling in a corporate society: The political economy of education in America*. New York: McKay.
- Carnoy, M. (1977). *Education and employment: A critical appraisal*. Paris: IIEP-UNESCO.
- Carnoy, M. (1984). *The state and political theory*. Princeton: Princeton University Press.
- Carnoy, M., & Levin, H. (1985). *Schooling and work in the democratic state*. Stanford: Stanford University Press.
- Carnoy, M., Lobo, J., Toledo, A., & Velloso, T. (1979). *Can educational policy equalize income distribution in Latin America?* London: Saxon House.
- Clegg, S. (1975). *Power, rule and domination*. London: Routledge & Kegan Paul.
- Freire, P., & Macedo, D. (1987). *Literacy: Reading the word and the world*. Amherst: Bergin & Garvey.
- Jarvis, P. (1985). *The sociology of adult and continuing education*. London: Croom Helm.
- Kozma, T. (1985). Conflict of interest in educational planning. *Prospects*, 15(3), 346-360.
- Kozol, J. (1985). *Illiterate America*. New York: Plume.
- La Belle, T.J. (1986). *Non-formal education in Latin America and the Caribbean: Stability, reform or revolution?* New York: Praeger.
- La Belle, T.J. (1988). Nonformal education for industrialization in Latin America: The human capital approach. *Alberta Journal of Educational Research*, 34(3).
- Levin, H. (1980). The limits of educational planning. In H. Weiler (Ed.), *Educational planning and social change*. Paris: IIEP-UNESCO.
- Literacy in Canada: A research report*. (1987). Ottawa: Southam Communications.
- Morales-Gómez, D. (1981). *Understanding education and work. Review of the main theoretical streams*. Ottawa: Mimeograph.
- Morrow, R., & Torres, C.A. (1988, February). *Social theory, social reproduction, and education's everyday life: A framework for analysis*. Paper presented at the Western Association of Sociology and Anthropology (WASA) Annual Meeting, University of Alberta.
- Morrow, R., & Torres, C.A. (in press). *Social theory, social reproduction and educational research*.
- Northern Development. (1981). *Projection of highway qualified manpower requirement in Northern Alberta*. Northern Alberta Department-Council.
- Offe, C. (1974). Structural problems of the capitalist state: Class rule and the political system. On the selectiveness of political institutions. In Von Beyme (Ed.), *German political studies* (pp. 31-56). Beverly Hills: Sage.
- Offe, C. (1984). *Contradictions of the welfare state*. London: Hutchinson.
- Pannu, R. (1988). Adult education, economy, and state in Canada. *Alberta Journal of Educational Research*, 34(3).
- Poulantzas, N. (1969). *Poder político y clases sociales en el estado capitalista*. Mexico: Siglo XXI.
- Reich, M., Gordon, D., & Edwards, R.C. (1975). A theory of labor market segmentation. In M. Carnoy (Ed.), *Schooling in the corporate society* (pp. 69-79). Stanford: Stanford University Press.
- Shor, I., & Freire, P. (1986). *A pedagogy for liberation*. Amherst: Bergin & Garvey.

- Therborn, G. (1980). *Why some people are more unemployed than others*. London: Verso.
- Thompson, J.L. (Ed.). (1980). *Adult education for change*. London: Hutchinson.
- Torres, C.A. (in press). The capitalist state and public policy formation. Framework for a political sociology of educational policy making. *British Journal of Sociology of Education*.
- Torres, C.A., & Unsicker, J. (1987). *Adult education as political education*. Paper presented to the International Congress of Political Education, Tabasco, Mexico.
- Weber, M. (1947). *Economy and society*. Chicago, IL: Free Press.
- Welton, M.R. (Ed.). (1987). *Knowledge for the people: The struggle for adult learning in English-speaking Canada 1828-1973*. Toronto: OISE Press.
- Youngman, F. (1986). *Adult education and socialist pedagogy*. London: Croom Helm.

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Preparation of Adult Educators in Alberta

Three phases in the evolution of training opportunities for adult educators in Canada are identified, and their sociological factors and modes of operation are noted. Some of the salient features of current programs in Alberta are described. The author concludes that preparation programs in adult education appear to be influenced more by contextual forces than by the process of needs determination and rational program planning.

Adult educators practice in diverse settings and bring varied perspectives to the task. All have in common the experience of assisting adults to become more competent in some aspect of their lives. Adult educators may be professionals or volunteers, working full time or part time, in a formal or nonformal setting, with or without specific training, and with or without a credential such as a certificate or degree in adult education. Adult education is a huge enterprise which has been estimated to absorb more than the total amount of money spent on formal schooling; yet the preparation of adult educators has not been the subject of much public concern or institutional activity.

This article deals with how adult educators acquire their training for entry into the profession or for professional development. From the Canadian and Albertan experience, an attempt is made to derive some propositions descriptive of the state of the art of program development.

Canadian Scene

Although Canada has a long tradition of service in adult education, it does not have a long tradition of preparation programs. Adult education in the 20th century has evolved through three phases, each distinguished by its sociological context, locus of activity, and training response.

The first phase was a mass movement which Welton (1987) referred to as a "tidal wave of social awakening" (p. 14), with stirrings in such far-flung places as Antigonish and Yellowknife, eventually consolidating in Toronto with the creation in 1935 of the Canadian Association of Adult Education.

This movement was founded on an ideology of social and ethical reconstruction as the nation struggled to cope with the great depression and its aftermath. Activities were concentrated on the special needs of the working classes and took place in town halls, churches, and on the work-site

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under the direction of a disparate group of teachers. In the 1940s the movement achieved national prominence through the effective use of mass media, especially radio, newspapers, and bulletins such as the Farm Radio Forum and Citizens' Forum.

Generally, the teachers in this phase were amateur adult educators—professors of extension, union leaders, priests, and even laborers—who had developed skills of public speaking. Although many modes of instruction were used, the most popular was the exhortative lecture followed by audience interaction and dialectic. Many of the teachers were successful scholars, but there was little or no opportunity for formal training in adult education. Griffith and Roberts (1982) note that the first undergraduate course on adult education was introduced in 1935 at Sir George Williams College. This was an early recognition of a budding profession.

The second phase of adult education began in the 1960s with an apparent shift in focus toward the individual learner. Some associated phenomena were the maturing of the baby boomers, the advent of sputnik, and the expansion of the postsecondary system. With the increase in formal sector activities, the need for teachers and administrators outpaced supply. Many of the new positions were filled by educators who were trained for careers in public schooling. At the same time, a whole new creed on the teaching of adults (andragogy) as distinct from children (pedagogy) was emerging under the influence of such writers as Knowles (1970) and Kidd (1973). These forces lent impetus to the growing recognition of need for specialized training.

To address this need, the first full graduate program of adult education was created at the University of British Columbia in 1961 (Griffith & Roberts, 1982). Other universities followed suit. In some instances, adjustments to existing programs were made. In other cases, new graduate degree programs in adult education were established.

The current third phase in the adult education movement is characterized by the ideals of lifelong learning and universality of access within a learning society. The rate of technological change has made continuing education a social imperative, and other factors such as the decline of the traditional college age group, unemployment, and the erosion of the monopoly of postsecondary institutions have had an impact. The distinction between adult education and postsecondary education has become blurred as each has moved into the preserve of the other. Even the tenets of andragogy have been questioned as theorists search for a unifying model of effective teaching. Adult education appears to lack unanimity of purpose. Welton (1987) has described it as being "fragmented along institutional lines," "professionalized, becalmed and technicized," and "captive to ideologies of the individual learner" (pp. 29, 30). A central concern appears to be the balance of forces between the social good and the individual's right to self-development, although these are not necessarily in conflict.

In conjunction with the universalization of adult education, preparation programs are now available across the nation. Wickett, Collins, McKay, and Plumb (1987) found that 10 universities offer graduate programs: Univer-

sity of Alberta, University of British Columbia, University of Calgary, Dalhousie University, University of Guelph, Université de Montréal, University of New Brunswick, Ontario Institute for Studies in Education, St. Francis Xavier University, and University of Saskatchewan. All offer masters degrees, and three (UBC, Montréal, and OISE) offer doctorates in adult education. All but Dalhousie and Guelph offer graduate diploma or certificate programs as well. Descriptions are provided in the Wickett report.

In some universities, specializations in adult education are offered at the undergraduate level. The University of Guelph has a Bachelor of Science (Agriculture) with a minor in extension education, and the University of New Brunswick offers a Bachelor of Arts in adult education. Five universities (Alberta, Queens, Toronto, Victoria, and Western Ontario) offer Bachelor of Education programs with an adult education option.

There are more similarities than differences among graduate programs. Where a Master of Arts is offered, a thesis is usually required. Most Master of Education programs provide a choice of thesis or research project. All graduate programs have a solid component of basic theory such as the sociology and psychology of the adult learner. The ratio of basic theory to practical courses is in the order of 3 to 4; the basic courses are more likely to be compulsory than are the applied courses. The master's program at St. Francis Xavier is individualized and carried out at a distance from the campus. The program begins with a three-week concentration on campus, after which the student completes three program phases in his or her own work setting, and then ends with a thesis. The numbers of part-time students in graduate programs outstrip full-time students by a ratio of 5 to 1.

The similarities in programs are explained in part by attempts to establish a dialogue on standards. To this end, a consortium of Professors of Adult Education has been established with membership representative of 16 Canadian universities. Also, the Commission of Professors of Adult Education, which is composed of American and Canadian professors, but with the former in a large majority, approved a statement of Standards for Graduate Programs in Adult Education covering curriculum, faculty, organization, student programs, resources and facilities, and scholarship. The extent to which this statement has influenced Canadian programs is speculative, but it reflects the professionalism which is being brought to this new program area.

Alberta

On a provincial scale, Alberta has experienced the same three phases of development. The leadership activities of the Department of Extension of the University of Alberta exemplified phase one, and the expansion of the postsecondary sector in the 1960s and 1970s was typical of phase two. Alberta created a comprehensive postsecondary system consisting of universities, public colleges, technical institutes, private colleges, and trade schools, and a diverse sector which includes vocational centers, hospital schools of nursing, and other specialized training centers. The formal system, as well as providing full-time credit programs, is heavily engaged in continuing education. Continuing education is also offered through the

school system and a large number of agencies which together constitute the nonformal sector. Coordination of noncredit education is accomplished through 85 Further Education Councils.

Three programs for training adult educators were initiated during the second phase at the University of Alberta. A master's program in Community Development was introduced in 1968, but it was withdrawn within a few years for a variety of reasons including funding and structural problems. In 1969 the Department of Educational Administration launched the College Administration Program with financial support from the Kellogg Foundation. After the initial five year period of funding, the program was terminated. Likewise, in 1977 the Faculty of Education introduced a graduate diploma program in postsecondary education which was suspended in 1982. In all cases, the discontinuance of these programs can be attributed more to lack of political will and insufficient funding than to a lack of commitment by those involved in the program or to poor client response.

By the 1980s Alberta's postsecondary system had grown to the extent of being among the most diverse and accessible in Canada. As a result, the participation rate in adult education is the highest in the country—one in four, compared to a national average of one in five (Statistics Canada, 1984). However, the acceptance of the need for specialized training in adult education has only recently occurred. One contributing factor was the survey of adult educators in Alberta undertaken by Duncan Campbell in 1977. About one third of the respondents were found to have no university training, one third had some university training, and one third had some graduate level study (Campbell, 1977). More specifically, Campbell found that "in the case of the leadership element in adult education ... about two-thirds reported involvement only in the most informal of preparation such as reading or discussion with interested others" (p. 153). On the basis of his findings, Campbell made a strong case for the provision of formal preparation in adult education at the graduate level. However, it would take several more years before such development took place.

Currently in Alberta, all four universities are involved to some extent in the preparation of adult educators, but the focus of action is the University of Alberta, the largest university in the province with approximately 30,000 full-time and part-time students. Study in adult education is available at several levels.

An adult education route was introduced at the University of Alberta as an option in the Bachelor of Education program in 1978. It is designed for those interested in teaching careers in technical institutes, colleges, and vocational centers, but at the same time it fulfills the requirements for a school teaching certificate. The Diploma in Postsecondary Education was reinstated in 1985. Admission requires any undergraduate degree and an interest in adult education. The program consists of eight three-credit courses, at least four of which must be in adult education.

In 1985, after about a decade of campaigning by advocates within the Faculty of Education, the Master's Program in Adult and Higher Education

was launched with the help of an Innovative Projects Grant from the Alberta Government. Prendergast (1987) comments on the tortuous process of program approval as follows:

In the final analysis the reasons for the slow evolution of the program was [sic] that during each initiative there were multiple realities the Faculty of Education was required to deal with. These realities included such things as budgetary restraints, structural mechanisms for administering such programs, and at times a lack of sense of urgency for such a program. It was not until these multiple realities gradually coalesced into the single reality that a program in Adult and Higher Education was absolutely necessary that the launching of the program occurred. (p. 70)

The Master's Program is built on the same principles as the Diploma—student centeredness, flexibility, and interdisciplinarity. It is comprised of core courses, options to support a concentration, research courses, and a thesis or project. One measure of the program's success is the market response to it. After three years of operation there were approximately 60 students enrolled in the program, exceeding the original estimate by about 33%. At the doctoral level, no specific programs in adult or higher education are available at this time, but students may pursue their interests through studies in related departments such as Educational Administration, Educational Foundations, and Educational Psychology.

Although the focus of training in Alberta in numerical terms is clearly Edmonton, the University of Calgary also offers a graduate diploma and a master's program. The diploma program carries the designation Diploma in Adult and Continuing Education. It is similar to the diploma at the University of Alberta in admission and course requirements, but it focuses more specifically on training for continuing and community education. This is also true of the master's program. The University of Calgary is notable in that it has been able to adopt many of the principles of continuing education into its graduate programs such as part-time studies and off-campus offerings.

In the noncredit training area, both the University of Alberta and the University of Calgary have been active for many years. In 1958 the Department of Extension (as it was then known) at the University of Alberta initiated the Alberta Adult Education Conferences. This series of two-day meetings featured lectures by national and international authorities. The success of these workshops and the research of Dr. Campbell, referred to earlier, led to the creation of an Adult Education Unit in 1977. Between 1977 and 1986, a total of 2,928 registrations were received in 129 workshops (Roberts, 1987).

The action in noncredit programming may have swung to Athabasca University, Alberta's "Open University." In February 1987 Athabasca University announced a \$1.5 million federally funded job-training project designed to sharpen the skills of industry-based trainers. "The three-year project, called Training the Trainers, will develop a teaching model to be used for in-house training in industry and business" ("Athabasca U," 1987). The project will produce a set of training packages for professionals. Although it is too soon to determine the impact of this project, it is assumed

that it will do much to enhance the skills of industry-based adult educators as well as to advance the acceptance of self-study training packages.

The training picture would be incomplete without mention of the tremendous range of nonformal training initiatives. That is, the actions of agencies whose primary function is not adult education. Most government agencies have officers who train department members who in turn train other adult employees. The same is true throughout the private sector.

Although the need for training programs for adult educators had been recognized in 1959 by the Alberta Royal Commission on Education which stated that "without a core of trained people, an effective adult education program cannot be created and maintained" (pp. 168-169), it required another 20 years before the rhetoric was translated into meaningful action. Even then, Alberta's attempts to mount professional programs at the graduate level sputtered, and Alberta came to be outdistanced in this respect by other provinces, most notably Ontario and British Columbia.

Finally, in the mid-1980s, thanks to the creativity and persistence of committed individuals in finding ways to circumvent financial and logistical barriers, a Master's Program in Adult and Higher Education was launched at the University of Alberta. While this is by no means the only program in the field, it is already, and will continue to be, at the forefront of the training movement in Alberta.

Conclusion

This review reveals that the provision of training is not simply the result of the logical identification of needs, followed by systematic arrangements to address these needs, but rather of a confluence of forces which at historic times set the stage for action. These forces arise from the social context and are conditioned by the dominant forms and practices of adult education. Preparation programs for adult education conform loosely with the field of practice; however, there appears to be a phase delay resulting in training provisions lagging behind the evident need by at least a decade. The rational demonstration of need through surveys and studies helps more by getting the attention of the public and opinion leaders than by discovering hitherto unknown salient facts. Training programs evolve to the extent that they acquire the political and financial support of backers, usually governments or foundations.

The creation of a university-based training program and its fulfillment of expectations does not guarantee its institutionalization within a competitive university environment. Successful programs need to be protected by gaining the support of internal and external influentials in order to establish a permanent place alongside other programs with unrelated goals but common funding sources.

Finally, it can be noted with some certainty that as adult education continues to evolve, so too will the training needs of teachers and facilitators. Therefore training programs must acquire a maximum degree of flexibility in both content and structure in order to maintain their relevance.

References

- Athabasca U to design training course for pros. (1987, February 7). *The Edmonton Journal*.
- Campbell, D. (1977). *Adult education as a field of study and practice*. Vancouver: University of British Columbia.
- Griffith, W., & Roberts, P. (1982). Adult education. In J. Andrews & W. Rogers (Eds.), *Canadian research in education: A state of the art review* (pp. 3-1 to 3-29). Canadian Society for the Study of Education.
- Kidd, J.R. (1973). *How adults learn*. New York: Association Press.
- Knowles, M. (1970). *The modern practice of adult education*. New York: Association Press.
- Prendergast, C. (1987). *The development of the adult and higher education program at the University of Alberta*. Unpublished project report, University of Alberta.
- Report of the Royal Commission on Education in Alberta*. (1959). Government of Alberta.
- Roberts, H. (1987). *Adult education unit review*. Unpublished report, Faculty of Extension, University of Alberta.
- Statistics Canada. (1984). *One in every five: A survey of adult education in Canada*. Ottawa: Author.
- Welton, M. (1987). On the eve of a great mass movement: Reflections on the origins of the CAAE. In F. Cassidy & R. Faris (Eds.), *Choosing our future* (pp. 12-35). Toronto: OISE.
- Wickett, R., Collins, M., McKay, W., & Plumb, D. (1987). *Adult education studies in Canada—1987*. Unpublished manuscript, University of Saskatchewan, Saskatoon, SK.

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The Evolution of Indian Adult Education Programs in Alberta

The article describes the evolution of adult education programs provided to registered Indians in Alberta over the past 100 years with particular reference to programs arranged outside the formal systems of education. It also examines three hypotheses relating to the orientations and outcomes of Indian education programs, especially those relating to the training and education of Indian adults. The argument is advanced that such programs have been assimilative in nature and that they have been of minimal long-term benefit to the people concerned.

This article reviews the range of adult education programs provided to registered Indians¹ in Alberta from the time of the Treaties in the 1870s to the present. It relates such programs as farming, health, upgrading, life skills, cultural and vocational education to the social and political frameworks designed for Indian adults by the federal and provincial governments. Although special reference is made to basic education arrangements, the paper focuses on adult programs provided outside the public school and higher education systems. Three hypotheses are examined in the study: first, that most programs for Indian adults have been seen as supplementary to school based programs rather than as learning activities of direct benefit to adults; second, that those programs having a vocational orientation have facilitated employment for few Indian adults and have not addressed the needs of the majority who continue to live in poverty and to experience high levels of social and cultural dislocation; and third, that most adult and other programs have contributed to the development of exclusive Indian communities that are largely dependent on transfer payments and other forms of external support.

Teaching the Indians

Trading and missionary groups made concentrated efforts to change the behavior of Indian adults in the West during the mid-19th century (Mabin-disa, 1984; Ray, 1974, 1981). With the signing of Treaties 6, 7, and 8, however, the educational focus shifted from the adult to the child. The schooling clause from Treaty No. 7 illustrates this point: "Her Majesty agrees to pay the salary of such teachers to instruct the children of said Indians as to her Government of Canada may seem advisable when said Indians are settled on their reserves and shall desire teachers" (Treaty No. 7, 1877).

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A Focus on Children

Successive Indian administrations generally held that little could be done with the Indian parent and that the focus of change should be on the Indian child. The antecedents of this view go back to the colonial period when French and British authorities believed that the Amerindian had to be changed from a state of savagery to a state of civility. Having achieved little success in converting Indian adults, Christian missionaries shifted their emphasis to the young. Indian children were sent to special boarding institutions away from the “pernicious influence of their Parents’ Example” (Axtell, 1981, p. 99) to be brought up English or French. The children endured a regimen of piety, literacy and labor designed to prepare them for the “task of converting their brethren to civilized Christianity” (Axtell, 1981, p. 66).

With the setting up of reserves and the establishment of Indian residential schools, the strategy of exclusion became more encompassing. Paradoxically, this exclusion eventually was supposed to facilitate inclusion into the white society. The catalyst in the exclusion-inclusion formula was, purportedly, the Indian child.

This policy, initially developed by the Indian administration of Canada West (Report on the Affairs of the Indians of Canada, 1847), was unequivocally expressed in the first Western Treaty signed in 1871. At this occasion, Lieutenant-Governor Archibald told the Indians assembled at Fort Garry that, “[your] Great Mother ... would like [you] to adopt the habits of the whites” and to send their children to specially designated schools (Morris, 1880, pp. 28, 31). The Indian Act of 1876 further indicates the assimilationist nature of Indian policy. The statutory authority granted the long-standing arrangements for Indian education between the churches and the federal government in 1880 reaffirmed and consolidated the policy of assimilating the Indian. Consequently, the churches played a major role in Indian education until the 1960s. For much of this time residential schools were considered to be the most effective institutions for changing Indian behavior. An indication of how intensive this policy was is evidenced in the 1931 Indian school returns. In that year, for example, 95% of the Indian children registered in school in Alberta attended residential institutions. The same source indicates that hardly any children went beyond elementary school and that virtually nothing was spent on adult education (*Annual Report of the Department of Indian Affairs*, 1930-31).

A Program of Integration

The educational programs designed to assimilate the Indians were not passively accepted. On the contrary, dissatisfaction with the character of the schooling contributed to the resurgence of Indian groups on the prairies in the 1930s. And by 1945, demands for restructuring the entire Indian system of education were presented to the federal government (Indian Association of Alberta, 1945). The government’s response to the demands, which included condemnation of residential schools, assumed more subtle forms of social exclusion. Integrated schools were introduced in the 1950s. In theory

such schools are the antithesis of exclusion; in practice a different situation existed. Because many Indian children did not do well in integrated schools, remedial programs were designed for them. More extreme cases involved separating Indian children from their parents and communities through foster care ("Indian Band Fights," 1982) and other custodial arrangements.

But concern in the 1950s was not restricted to the "welfare" of Indian children. References were also made to the need to "rehabilitate" Indian adults. In response to these concerns the Department of Indian Affairs began funding adult programs in 1956. More specific comments about adult education are contained in the Minutes of the Joint Parliamentary Committee on Indian Affairs in the early 1960s. A 1965 departmental report, however, indicated that expenditures in the area of adult education were primarily seen as a way of helping Indian parents understand the nature of their children's schooling (Gooderham, 1965).

In an effort to resolve some of the principal issues concerning Indian conditions, the federal government issued the *White Paper on Indian Policy* in 1969. Indian leaders viewed the Paper as an attempt by the government to abandon its responsibilities for Indian Affairs. They responded with counter proposals such as Citizens Plus (1970) and *A Declaration of Indian Rights* (Union of British Columbia Indian Chiefs, 1970). The central themes of these proposals were arguments for "local control" and "parental responsibility." These themes were reiterated in a National Indian Brotherhood policy paper, *Indian Control of Indian Education*, presented to the Minister of Indian Affairs in December 1972. When the Minister agreed "with the paper's basic position of Indian parental responsibility and local control in education" (Chrétien, 1973), a course was set in which Indian parents were expected to devote greater time and energy to "remedial and coping types of education" for themselves and their children (Roberts, 1982, p. 150). But forms of adult education that addressed their personal, social, and cultural needs were either given lower priority or were put aside entirely.

Education and Work

Whether schooled or not the Indian was expected to obtain gainful employment. There were indications in the last quarter of the 19th century that Indians were adjusting to the new order (Dion, 1979, pp. 122-123). But with the setting up of a network of local Indian agencies early in this century the government adopted an increasingly autocratic and regulatory stance which, according to one observer, had as its ultimate end "the emancipation, i.e., the admission of the Indian people into full citizenship and their biological absorption" (Harper, 1945, p. 132).

The means of achieving this in Alberta depended on the location of the reserve. Indians in the boreal forest were expected to maintain themselves through trapping activities, while those in southern areas were expected to become farmers or ranchers. Little instruction was thought necessary for northern groups; whatever was needed could be provided by teachers and missionaries and by provisions of twine and ammunition. In the agricultural areas instruction was carried out mainly on model reserve farms or by encouraging Indians to pick up the necessary skills as laborers on nearby

farms. The reports of Indian agents were invariably optimistic about the progress being made, that is, until the 1930s when the depression and declining fur prices put an end to such comment (*Annual Reports of the Department of Indian Affairs*, 1905-06/1934-35). Following the Second World War, a parliamentary committee found the Indians' social and economic situation to be worrisome (Proceedings of the Special Joint Committee of the Senate and the House of Commons on the Indian Act, 1946-1948). This prompted the establishment of non-child-related adult education programs in the 1950s and 1960s involving one or more of the following activities: basic literacy, academic upgrading, vocational and trades instruction, social and community skill training, and placement and relocation counselling (Carney, 1982, p. 3). Many programs involved short-term courses such as welding, handicrafts, and office practice, but from time to time a number of major activities were merged into one program. The availability and intensity of the activities varied, but their implicit rationale was that they provided a "safety net" for those who had "failed the first time around." In addition to reinforcing child-based programs by providing instruction in school support and health care, many of the new adult education programs attempted to address a "politically intolerable ... situation in which the pool of virtually unemployable native-born continued to grow larger and larger" (Thomas, 1981, pp. 253-256).

Adult Education for Indians

As background to a discussion of the social and economic conditions of Indians in Alberta in the 1980s, a review is made of the following Department of Indian Affairs adult education programs: (a) the Indian welfare teacher, (b) Indian adult educators, (c) the Elliott Lake Relocation Project, (d) Community Vocational Centres, and (e) Postsecondary Education. It is assumed that the measures involved would have had an ameliorative effect on Indian conditions described by the Joint Parliamentary Committee on Indian Affairs (1946-1948) and that the social and economic distance existing between Indian and non-Indian societies would have been lessened accordingly.

The welfare teacher. Immediately following the War the Department of Indian Affairs established Indian Welfare Teacher positions. Those recruited were subject to civil service regulations and, according to the Minister responsible, were expected "to provide community leadership and so help to make the settlements in which they work happier, healthier and better organized places" (Winters, 1951, p. 47). By 1951 their exploits were being heralded in the *Indian School Bulletin* and in a Departmentally produced filmstrip. An account of the activities of a Welfare Teacher at Fort McPherson demonstrates what the Department had in mind. The teacher not only had full-time classroom duties and an active extracurricular program, she also settled family disputes, gave advice on financial matters, and conducted evening classes for adults (*Indian School Bulletin*, 1951). The activities of Welfare Teachers ended in the mid-1960s when their out-

of-school tasks were taken over by a new group of adult educators and by other Departmental personnel.

Adult instructors. By the end of the 1960s there were three full-time Indian Affairs adult educators in Alberta including a Supervisor of Adult Education at regional headquarters in Edmonton. Much of their activity was devoted to academic upgrading, mostly for young adults, and to band leadership training. In a 1970 memorandum the Supervisor made it clear that it was "our [the Department's] duty to let them [the Indians] know what is available in the way of instruction and how it is likely to benefit them" (Trussler, 1971, p. 2). By 1971 the region's post school program had 23 staff, five adult educators, and 20 vocational and employment relocation counsellors. Most adult programming involved academic upgrading, and much of the instruction was carried out by school districts and community colleges. Both budget allocations and staff numbers indicate that the highest priority was given to training, placement, and relocation programs that led to permanent employment off the reserve. Approximately three percent of the Alberta Region's total education budget (in school and post school) was assigned to civic education, academic upgrading, and informal vocational education in 1971-72 (*Post School Program in Alberta*, p. 14). It is not known to what extent the adult educators worked with another unit in the Department, the community development officers in the Social Programs Division. Because the CDOs in Alberta were not civil servants, their autonomy only heightened the view among Indian Affairs officials that they were "trouble makers" (McEwen, 1968, p. 29).

Elliott Lake. The Pilot Relocation Project at Elliott Lake is an example where a range of post school programs was brought together: upgrading, life skills, vocational training, and placement and relocation counselling. It began in January 1967 and was sponsored by Indian Affairs, Canada Manpower, and the local Provincial Centre for Continuing Education. It involved 20 Indian families who were brought out from reserves in Northern Ontario to Elliott Lake. An Indian Affairs official explained the undertaking as follows:

As you know there are twenty-five thousand Indians in Northern Ontario and many of these are living in areas that are economically depressed, and the idea was to bring them out to industry rather than attempting to bring industry to them. (*Elliott Lake: Indian Relocation*, 1967)

Most of the families did not complete the program. While a government evaluation found the project wanting in several respects, it expressed the hope that its failure would not reverse "what was essentially a sound policy decision by the [Indian Affairs] Branch to enter upon a relocation program for one hundred thousand Canadian Indians" (Bond, 1968, pp. 2-3). One need not list the measures officials proposed to overcome the difficulties inherent in "crash programs" like Elliott Lake (Gooderham, 1965, p. 101); and while they suggested greater Indian involvement, their program orientations remained pretty much the same.

Community Vocational Centres. The establishment of Community Vocational Centres (CVCs) in Northwestern Alberta in the early 1970s indicates

what had been learned from the Elliott Lake experience. Having achieved some success in Native adult programming in Alberta and Saskatchewan in a project known as Newstart, the Department of Regional and Economic Expansion (DREE) teamed up with the Alberta Human Resources Development Authority (HRDA) in 1970 to implement a plan for the social and economic development of the area around Lesser Slave Lake. This joint federal-provincial effort sought to address the needs of native people in a comprehensive manner. Although governed by locally elected Education Management Committees, the Community Vocational Centres were expected to operate within the framework of the regional development plan by providing occupational and other employment related skills. It was also understood that the institutions should meet a number of other objectives, including "upgrading youthful academic dropouts and helping local communities create an advantageous and supporting climate for children to continue education in local schools" (Card, 1975, p. 171).

The clientele of the Centres is made up of adults and out-of-school youth. Full-time students are expected to take an Adult Life Management course which is designed to provide "educationally and socially disadvantaged adults with a holistic educational experience which addresses skills necessary to cope successfully with contexts pertaining to an adult role, e.g. health and safety of self and others, citizenship, managing home and family, earning a living" (*Development Plan*, 1984, Appendix 1). As many as 22 CVCs have been in operation in a single year, and more than 30 communities have been served by some 65 programs (Burkholder, 1986, p. 5). Most assessments of the CVC program have been positive (Burkholder, 1986; Card, 1975; *Institutional Self-Study*, 1979) with the possible exception of a 1979 external evaluation. The evaluation found few courses relating "specifically to native technologies and ideologies" and "no indication of any formal follow-up of students graduating or leaving the program" (Carney & Simpson, 1979, pp. 28, 32). It is surprising that courses or programs related to Indian languages or systems of belief, for example, are offered so seldom, especially when Native people have been given the responsibility for program development. Whatever the cause, the situation appears not to concern the CVC administrators. Staff evaluations of the program's success are either largely anecdotal (Burkholder, 1986, p. 6) or disingenuous (*Institutional Self-Study*, 1979, p. 10) in their references to the activities and destinations of program graduates. Unlike some recent adult-vocational programs in the United States such as the Manpower Demonstration Research Corporation Project (Auletta, 1982), CVC program outcomes have not been researched on a long-term, arm's length basis.

Postsecondary education. The CVC initiative, which continues to be managed by the Alberta government, is only one of the many Indian post school programs funded by Indian Affairs and by other federal agencies. As Table 1 indicates recent Indian Affairs post school programs have emphasized academic, professional, and vocational education.

The figures in Table 1 reveal a growing trend by Indian Affairs to support only those programs involving "the knowledge and skills appropriate to

TABLE 1
Post School Education, Department of Indian and
Northern Affairs Alberta Region

Type of Education	Expenditure 1977-78	Allocation for 1979-80	Allocation for 1987-88
University and Professional	\$993,880	\$1,415,600	\$14,700,000
Occupational Skills	948,400	1,204,000	1,700,000
Band Staff Training (Indian Management Program)	279,500	146,000	220,000
Training on the Job	163,500	155,400	650,000
Adult Education	279,300	81,500	(included in occupational skills)
Cultural Programs	27,700	10,000	662,264

Source: Indian Association Analysis of D.I.N.A. Financial Statements (Roberts, 1982, p. 153); Cultural and Linguistics Section, I.N.A.C. (Ottawa), Education Section Employment and Training Section I.N.A.C. (Edmonton)

economic integration" (Roberts, 1982, p. 150). As the allocation for 1987-1988 indicates, one result of this emphasis has been to transfer the budget for adult education to the occupational skills program. Both the Alberta and federal governments have resolved "to support self-sufficiency for Native (Indians/Metis) and their communities by minimizing dependency creation and maximizing the development of local economies" (*Canada/Alberta, Memorandum of Understanding*, 1985, p. 2). However, as is shown later in the discussions on socio-economic issues and inclusionary and exclusionary models, most employment initiatives on reserves either have been unsuccessful or have been maintained by compensation arrangements. Moreover, few post school programs are provided on reserves. Those that exist are either offered by provincial agencies in Indian-managed adult centers such as Old Sun or Blue Quills, or by provincial universities and colleges. Because viable economic enterprises on the reserves are not seen to be likely, the direction of most post school programs is toward off-reserve placement and employment. Even when agricultural projects are considered, surveys suggest that the amount of suitable reserve land (Class 4 or better) would only sustain a fraction of the population on most reserves (*The Agricultural Potential of Native Communities*, 1986).

The substantial increase in cultural funding noted in Table 1 suggests a major initiative to support what are generally seen as vital sources of "personal and collective strength" (Roberts, 1982, p. 10). However, when funds are distributed to the various cultural communities and organizations (*A Guide to Native Organizations in Alberta*, 1988) and among eight Indian linguistic groups that include the 42% of registered Indians in Alberta

whose mother tongue is an aboriginal language (Jarvis, 1987, p. ix), the net benefit is minimal.

It should also be noted that present cultural program funding is largely a substitute for an Indian Association of Alberta (IAA) proposal in the late 1960s. It advocated the development of an Alberta Indian Education Center (Indian Association of Alberta, n.d.) where the Province's 42 bands would come together to follow a curriculum based on Indian languages and "on research in, and the practice of, Indian traditions and history" (Roberts, 1982, p. 156). The federal government had misgivings about a central facility, its cost especially, and decided instead to fund 10 local cultural centres. Most of these, however, devote much of their time to vocational and professional training. When the levels of cultural funding are contrasted with the scope and strength of mainstream influences, it is clear that, despite the efforts of the IAA and other Indian groups, the cultural and linguistic integrity of Indian communities is under threat of extinction.

Although current allocations indicate that such post school programs as professional and occupational training are reasonably funded, the maintenance of these programs is almost as precarious as those having a cultural orientation. The university and professional allocation has been raised in part because of some 80,000 Bill C-31 (restoration of status) applications ("Indian Affairs Foul-Up," 1988). The call on the Department's resources by those who have regained Indian status will undoubtedly make less post school funding available, particularly to Indians on reserves. Moreover, while Indian Affairs continues to fund education and training for adults, the Department contends that it does not have a statutory responsibility for such programs. Because of the schooling sections of the Treaties and the Indian Act, the Department accepts responsibility for the education of Indian children. It does not consider that it has an obligation to provide other educational or post school programs. The nature of post school programs for Indian adults can therefore be summarized as being decentralized, discretionary, and job oriented. These orientations have been in place since the inception of adult education programs for Indians. The social and economic outcomes resulting from them and other government programs are reviewed in the section that follows.

Socioeconomic Issues

What are the major outcomes of the Indians' historic experience with formal education? Although the level of schooling is only one of the factors that determine social and economic status, successive Indian administrations have held education to be a critical element in helping Indians to become self-supportive. As background to an examination of the current state of Indian education, employment, and income, a brief overview of other social, economic, and demographic conditions is given using data from Siggner and Locatelli (1980) and Jarvis (1987).

Reserve conditions. Seventy-five percent of Alberta's 45,595 registered Indians (1986) live on 90 reserves which on average are the largest in Canada (18,000 acres per reserve), and over 50% of the Province's Indian

bands reside less than 50 kilometers from health and educational services in urban centers. Housing on reserves is relatively new; 61% of reserve dwellings "were built in the decade prior to the 1981 census compared with 47 and 45% of non-Indian and off-reserve Indian dwellings, respectively" (Jarvis, 1987, p. xii). Despite their relative newness reserve houses were in "comparatively inferior condition." Over two fifths were crowded, nearly one quarter needed major repair, slightly over one half had no central heating and more than a third lacked a bathroom. "By contrast, for example, only six percent of non-Indian dwellings lacked central heating and only two percent were without a bathroom" (Jarvis, 1987, p. xiv). The Indian population is more youthful than Alberta's population as a whole. And while "the proportion of Indians aged 0 to 14 is expected to decline by 1991," predictions into the early 1990s indicate that the 0 to 14 proportion will be "15 percentage points higher than the Alberta population" and that "the Indian dependency ratio will be just over one half higher than the ratio for all Albertans" (Jarvis, 1987, pp. vii, viii). The difference between Indian life expectancy and that of the Canadian population has decreased, but it is still approximately 10 years less than other Canadians. Despite declines in the incidence of tuberculosis and infant death, Indian mortality is generally higher than that for non-Indians. The amount of social assistance has dropped in several areas such as children in care on reserves; however, "the number of Indian children adopted increased sevenfold in Alberta between 1971 and 1981, and more of these children, two thirds, in 1981, were adopted by non-Indians than in the past" (Jarvis, 1987, p. xiv). Although North American Indians (Indian and other Native groups) made up only 3.75% of the Province's population in 1981, they comprised nearly 12% of the federal inmate population in Alberta over the 1974 to 1983 period.

Educational Outcomes

Although there have been improvements in Indian schooling outcomes (Signer & Locatelli, 1980, p. 32) and increases in the number of entrants to continuing education programs (Jarvis, 1987, pp. 89-91), it is clear that Indians as a group are still disadvantaged with respect to school attendance and educational achievement. Table 2 below indicates Indian and non-Indian achievement levels in 1981.

When compared with the reference group (Alberta's population less registered Indians), Indian schooling levels are the lowest in every category. Reserve Indians have lower schooling levels than off-reserve Indians. Forty percent of Alberta's Indians, versus 12% of non-Indians, are functionally illiterate; that is, they have achieved less than a grade nine education. High school completion rates show a similar disparity: 56% of non-Indians have completed high school or beyond, more than double the Indian proportion of 25%.

Other data in Jarvis' study show that Indians are more likely to be in grades inappropriate for their age and that 10% of non-Indians versus one percent of Indians have completed university. In the period 1976-1981 a four-fold increase in the number of Band-operated schools occurred,

TABLE 2
Population 15 Years of Age and Over Showing Highest Level of Schooling
Alberta, 1981

Highest Level of Schooling (Col. %)	Registered Indians On-Reserve	Registered Indians Off-Reserve	Total Registered Indians	Reference Population
No schooling or kindergarten	9	2	7	1
Grades 1-8	40	20	33	11
Grades 9-13	34	38	36	32
High school plus	17	40	25	56
Total %	100	100	100	100
No. (000)	13.8	7.9	21.7	1,650.9

Source: Jarvis, 1987, p. 82

amounting to 10% of the registered Indian students, and it is estimated that the percentage is now close to 20. Several Bands have introduced high school programs on reserves, and while this is expected to increase completion rates, no information is available to indicate that this has happened. What is known, however, is that off-reserve Indians attend school more often, reach higher levels of education, and participate more in continuing education programs than Indians on the reserves. In the 15 to 19 age group, 49% of off-reserve Indians were in school, whereas only 34% of on-reserve Indians attended school. In the next age category, 20 to 24, 18% of Indians living off reserve attended school, versus 10% for on-reserve Indians. Despite improvements in the last decade Indian school attendance and educational achievement rates continue to place them in a disadvantaged position particularly with respect to income and employment.

Indian Employment and Income

Indian employment rates and income statistics are normally seen in the context of the values associated with an industrial society. But terms like labor force participation and unemployment may not be appropriate for Indians who follow a traditional lifestyle or who live in remote settlements. An excerpt from a 1984 Statistics Canada report, *Canada's Native People*, is given below to illustrate the nature of these factors:

Many Native people who are living on the land may not show up as participating in the labour force because what they produce is consumed rather than sold in the market-place.... In addition, the isolation of the areas where many Native people live discourages active job search, and thus they may not be counted among the unemployed. (quoted in Jarvis, 1987, p. 94)

There are other definitional limitations in reporting on Indian income and employment. It would be unusual, for example, to consider knowledge of an aboriginal language along with an official language as a job prereq-

uisite, or when analyzing income levels to take into account the collective nature of reserve governance where the central unit of economic involvement is often the Band rather than the individual.

One way of examining Indian incomes is to look at the source of income by residence. Table 3 shows that 12% of the reference population and 27% of registered Indians had no income in 1981. Indians living away from reserves were more likely to have incomes than those on reserves. Twenty-three percent of reserve Indians, versus 8% of the reference population, reported their major source of income to be government transfer payments. Seventy-three percent of non-Indians reported employment income as their major income source, followed by off-reserve Indians at 63%, and Indians living on the reserve at 42%. Government transfer payments are clearly a major source of income for Indians, especially for those living on reserves.

Other data in Jarvis' report indicates that labor force participation is much lower for Indians than for non-Indians and that 40% of Indians were employed compared with 70% of the reference population. In 1980 the average individual Indian income was approximately \$8,300, 56% of the average non-Indian income of \$14,800. Corresponding differences exist in comparing Indian and non-Indian incomes in similar occupations. For example, "The difference in primary occupation income [1980] was \$6,200 in favor of non-Indian men, a 58% difference, and \$3,000, or 70%, for females" (Jarvis, 1987, p. 112). More than twice the proportion of non-In-

TABLE 3
Population 15 Years of Age and Over Showing Major Source of Income
Alberta, 1980

Major Source of Income (Col. %)	Registered Indians On-Reserve	Registered Indians Off-Reserve	Total Registered Indians	Reference Population ¹
Without income	31	20	27	12
With income	69	80	73	88
Employment income ²	42	63	49	73
Government transfer income ³	23	15	20	8
Miscellaneous income	4	2	3	7
Total	100	100	100	100

¹Total population less registered Indians

²Income received as wages and salaries, net income from non-farm self-employment, and/or net farm income

³Income received from all cash transfer payments from all levels of government. Included are family allowances, old age security pensions and guaranteed income supplements from the Canada Pension Plan, Unemployment Insurance and welfare payments, together with income from other government sources.

Source: Jarvis, 1987, p. 113

dian economic families received incomes in 1980 of \$30,000 and up. Only four percent of non-Indian economic families received under \$5,000 in the same year, versus 14% of Indian economic families. Finding a positive correlation between Indian income and education, Jarvis summarizes his analysis as follows: "These findings emphasize the need for greater access to education for Indians. Opportunity to earn substantial income was listed closely with educational opportunities, for the Indian population, especially for those who have moved from the reserve" (Jarvis, 1987, p. 109).

It has been demonstrated that most programs for Indian adults have been seen as adjuncts to school based programs rather than as learning activities of direct benefit to adults. It has also been shown that most vocational and adult programs have facilitated employment for a minority of the Indian adult population and that they have not met the needs of a majority of Indians who continue to experience high levels of social and economic dislocation. The paper's third hypothesis, that most Indian Affairs programs have contributed to the development of exclusive Indian communities, is discussed in the section that follows.

Inclusionary and Exclusionary Models

As has been noted the exclusion-inclusion formula in which Indians were to be held on reserves and educated in boarding schools prior to their eventual emancipation in the wider community was abandoned following the Second World War. According to Hawthorn and Tremblay (1967) the post war period brought an end to the Department's paternalistic attitudes and witnessed a new trend in the federal government's Indian policy:

Initiative on the part of the Indian and the opening of reserves to the outside world was fostered. Indian children began to attend the same schools as Whites. As these first experiments proved successful, efforts were continued in this direction with the particular objective of integrating the Indian into Canadian society. (p. 23)

But the integration ideology began to unravel largely because of Indian opposition to the 1969 White Paper on Indian Policy. The federal government yielded to these pressures when it accepted the principles enunciated in the N.I.B.'s *Indian Control of Indian Education* which involved a fundamental change in direction. The development of reserve schooling under Band auspices was one of the many devolutionary changes in social programming initiated by the Department. The outcomes of the new direction are as yet unclear, but there is evidence that it has led to a new form of exclusion on the reserves.

In this regard Lithman's (1984) discussion is particularly instructive. After outlining two emerging forms of community leadership, the collaborative and the challenging, and the ensuing relationships between government officials and chiefs and councillors, he states that reserve leadership is moving toward the challenging or ethnic incorporation model. The choice, however, is more complex than adherence to a particular paradigm. What is occurring, according to Lithman, is a trend more toward an in-group or opposition ideology. He contends that the opposition ideology leads to a number of benefits. It provides an economic system where transfer payments

allow the opportunity to withdraw from the economic life of the area outside the reserve: "These transfers ensure to many a standard of living which, even if poor, is no worse than what would be the case working in temporary, unskilled jobs in the area" (p. 170). The ideology posits that fundamental differences exist between Indian and Whites: "Through their obsession with money, concern with social rank, their inhumanity when dealing with Indians, their unfairness—in all the Whites are seen by Indians as the very opposite of what a human being would be" (p. 170). In contrast the ideology "prescribes what Indians are and what should guide their interaction" (p. 171). Indian history, languages, and an Indian centered curriculum, Indian teachers, elders, and cultural centers are sought as a means of instilling the young with a sense of pride in their heritage. The opposition ideology also provides an historical interpretation "which sees the Indians' present-day situation as a result of ... the deceit of the White men, most importantly manifested in connection with the treaties" (p. 171). All these orientations reflect a "search for ways whereby the community can be developed, economically and socially, with the community residents in full control" (p. 173).

There is no doubt that this strategy has led to a rise in the standard of living on reserves, but these improvements are not because of increased Indian participation in mainstream economic processes, but rather because of the "compensation the larger society pays for their [the Indians'] exclusion from these processes" (Lithman, 1984, p. 174). Lithman argues that the government's current policy is essentially one of containment. By making reserve communities more inhabitable from an economic point of view, fewer Indians have reason to subject themselves to outside indignities or pressures. By excluding Indians from the wider society and by providing compensation payments to them, the federal government has also lessened the level of public concern about Indian conditions. The exclusion strategy, however, does not address the causes of the continuing plight of many Indians on reserves, but it does show that government is doing something, even if it is "doing too little or the wrong things" (Lithman, 1984, p. 175).

Lithman's concept of an opposition ideology can be seen to be at work in many reserves in Alberta, even in those which have access to substantial oil and gas production revenues (Dion Resource Consulting Services, 1984, pp. 14-19). There are alternative approaches underway, however, which are more in keeping with Lithman's other model, that of collaborative strategy: "The collaboration protagonists would like to see Indians *as individuals* prepare themselves through education, etc., so that they need not have to accept a position inferior to that of the White men" (Lithman, 1984, p. 166). An example of this approach can be found in the *Final Report* (1987) of the Working Group on Native Education, Training, and Employment. The group, composed mainly of Indians and Metis, was commissioned by the Alberta Minister of Municipal Affairs and Career Development and Employment in 1985 "to provide advice and recommendations to the appropriate Ministers on ways of addressing the barriers to education, training, and employment faced by Native people (*Final Report*, 1987, p. 1). The group's

recommendations are all-encompassing and highly collaborative in nature, and they are predicated on a degree of cooperation between government agencies and Native communities which has been proposed on many previous occasions.

Conclusion

It has been shown that most programs for Indian adults have been seen as supplementary to school based programs rather than as learning activities of direct benefit to adults. Even the benefits of existing adult education programs and training for Indians tend to be viewed as accruing largely to the participants' children rather than to themselves. Such a predilection means that the success of such endeavors is not immediately measurable. It has also been demonstrated that programs having an adult and vocational orientation have facilitated employment for few Indian adults and that they have not addressed the needs of the majority who continue to live in poverty and to experience high levels of social and cultural dislocation. Notwithstanding the emphasis that successive Indian administrations have placed on schooling and other educational arrangements, the educational levels of Indian parents and their children are still far below those of other Canadians. Finally it has been argued that the Department of Indian Affairs and other government agencies have fostered exclusionary policies which, although differing in form over time, have remained substantially the same in intent. Exclusion initially involved holding Indians on reserves and in residential schools until they were ready for inclusion in the wider society. As a result of policies initiated in the 1950s to accelerate Indian inclusion, Indian children often found themselves in new exclusionary contexts such as foster care and remedial schooling. More recently Indians have been excluded on reserves where they are sustained by compensation and other containment arrangements. In short the policy of exclusion has been remarkably consistent. The Indian must become non-Indian in order to achieve self-sufficiency or to become self-supportive.

Note

1. The term Indian refers to those Canadians who are registered as Indians by the federal government. It does not include other groups of Native people such as the Métis, Inuit, and non-status Indians. The Indian population of Alberta in 1986 was 45,595.

References

- The agricultural potential of Native communities—Phase 1.* (1986). Edmonton, AB: Group Four Rural Service Corp., Native Affairs Secretariat.
- Annual reports of the Department of Indian Affairs.* (1896-1936). Ottawa, ON: King's & Queen's Printer.
- Auletta, K. (1982). *The underclass*. New York: Random House.
- Axtell, J. (1981). *The European and the Indian: Essays on the ethnohistory of colonial North America*. New York: Oxford University Press.
- Bond, J.J. (1968). *A report on the pilot relocation program at Elliott Lake, Ontario.* (Submitted to the Department of Indian Affairs and Northern Development). Edmonton, AB: Boreal Institute, University of Alberta.
- Burkholder, H.J. (1986). *The evolution and development of the Community Vocational Centres Program: 1960-1985.* Unpublished master's thesis, University of Alberta, Edmonton, AB.

- Canada/Alberta, cooperation on Native (Indian/Metis) development—Memorandum of understanding. (1985, August 29). Edmonton.
- Card, B.Y. (1975). Community vocational centres in northwestern Alberta. *Alberta Journal of Educational Research*, 21(3), 168-182.
- Carney, R. (1982). The road to Heart Lake: Native people, adult learners and the future. *Canadian Journal of Native Education*, 9(3), 1-13.
- Carney, R., & Simpson, B. (1979). *Institutional evaluation: Community vocational centres*. Edmonton, AB: Department of Advanced Education and Manpower.
- Chrétien, J. (1973, February 2). *Minister of Indian Affairs and Northern Development to G. Manuel (President of the National Indian Brotherhood)*. Ottawa, ON: Department of I.A.N.D. files.
- Citizens Plus. (1970). *Indian Chiefs of Alberta*. Edmonton, AB.
- Development plan. (1984, October). Community Vocational Centres of Alberta.
- Dion, J.F. (1979). *My tribe the Crees*. Calgary, AB: Glenbow Institute.
- Dion Resource Consulting Services. (1984). *Indian lands: Social impact of petroleum activity*. Edmonton, AB: Prepared for the Department of Indian Affairs and Northern Development.
- Elliott Lake: Indian relocation. (1967). Challenge for Change Series. Montreal, PQ: National Film Board.
- Final report—Working group on Native education training and employment. (1987, December). Edmonton, AB: Department of Municipal Affairs.
- Gooderham, G.K. (1965). Prospect. In L.G.P. Waller (Ed.), *The education of Indian children in Canada* (pp. 95-103). Toronto, ON: Ryerson Press.
- A guide to Native organizations in Alberta. (1988, January). Edmonton, AB: Department of Municipal Affairs.
- Harper, A.G. (1945). Canada's Indian administration: Basic concepts and objectives. *America Indigena*, 5(2), 121-132.
- Hawthorn, H.B., & Tremblay, M.A. (1967). *A survey of the contemporary Indians of Canada*, Vol. 2. Ottawa, ON: Indian Affairs Branch.
- Indian Affairs foul-up. (1988, April 7). *Edmonton Journal*, p. A1.
- Indian Association of Alberta. (n.d.). *Alberta Indian Education Center*.
- Indian Association of Alberta. (1945). *Memorial to the Government of Canada*. Oblate Records, Provincial Archives of Alberta.
- Indian band fights for its children. (1982, February 26). *Edmonton Journal*, pp. B1, B2.
- Indian School Bulletin. (1951, January). Ottawa, ON: Department of Citizenship and Immigration.
- Institutional self-study of the Community Vocational Centres. (1979, January). Edmonton, AB: Department of Advanced Education.
- Jarvis, G.K. (1987). *An overview of registered Indian conditions in Alberta*. Ottawa, ON: Indian and Northern Affairs Canada.
- Lithman, Y.G. (1984). *The community apart: A case study of a Canadian Indian Reserve community*. Winnipeg, MB: University of Manitoba Press.
- Mabindisa, I.K. (1984). *The praying man: The life and times of Henry Bird Steinhauer*. Unpublished doctoral dissertation, University of Alberta, Edmonton, AB.
- McEwen, E.R. (1968). *Community development services for Canadian Indian and Metis communities*. Toronto: Indian-Eskimo Association of Canada.
- Morris, A. (1880). *The treaties of Canada with the Indians of Manitoba and the Northwest Territories*. Toronto: Belfords, Clarke.
- National Indian Brotherhood. (1972). *Indian control of Indian education*. Ottawa.
- Post School Program in Alberta. (1971-72). Edmonton, AB: Department of Indian Affairs and Northern Development.
- Proceedings of the Special Joint Committee of the Senate and the House of Commons on the Indian Act. (1946-1948). Ottawa, ON: King's & Queen's Printer.
- Ray, A. (1974). *Indians in the Fur Trade: 1660-1870*. Toronto, ON: University of Toronto Press.
- Ray, A. (1981, October 26). *The Natives are our assets: We must keep them for future profits, debt and welfare in the Hudson's Bay Company Fur Trade, 1670-1930*. Public lecture, University of Alberta, Edmonton, AB.

- Report on the affairs of the Indians in Canada. (1847). *Journal of the Assembly of the Province of Canada*.
- Roberts, H. (1982). *Culture and adult education: A study of Quebec and Alberta*. Edmonton: University of Alberta Press.
- Siggner, A., & Locatelli, C. (1980). *An overview of demographic, social and economic conditions among Alberta's registered Indian population*. Ottawa, ON: Indian and Inuit Affairs Program.
- Thomas, A.M. (1981). Education: Reformation and research in the '80s? In J.D. Wilson (Ed.), *Canadian education in the 1980s* (pp. 251-267). Calgary, AB: Detsilig Enterprises.
- Treaty and supplementary Treaty No. 7 made 22nd September and 4th December, 1877 between Her Majesty the Queen and the Blackfoot and other Indian tribes at the Blackfoot crossing of Bow River and Fort MacLeod*. (1966). Ottawa, ON: Queen's Printer.
- Trussler, N.E. (1971). *Education programs for Indian adults in Southern Alberta*. Unpublished master's thesis, University of Calgary, Calgary, AB.
- White Paper—Statement of the Government of Canada on Indian Policy*. (1969). Ottawa, ON: Queen's Printer.
- Winters, R.H. (1951). Education goes north. *Canadian Geographical Journal*, 42(1), 44-49.
- Union of British Columbia Indian Chiefs. (1970). *A declaration of Indian rights*. Vancouver, BC.

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Participatory Research: A New Research Paradigm?

Participatory Research (PR) is becoming more widely known among adult educators as well as social researchers. The author explains its origins linked to the Latin American experiences of the so-called "popular education" and describes its characteristics. The criticisms of its supporters against prevailing social research are then presented. A critical examination of PR follows which points out its insufficiencies and ambiguities. Based on these, the claim that PR constitutes a new research paradigm for the social sciences is dismissed. This notwithstanding, it is concluded that some useful lessons should be drawn from PR for improving present social research practice.

The history of Participatory Research (PR) is inherently connected to the experiences of adult education and specifically to popular education in Latin America. These experiences have been the departure point for PR and have constituted the major source of input into the gradual shaping of this new approach to researching social reality.

Adult education in Latin America has a different connotation from the concept currently used in industrialized countries. It is not related to education where adults are retrained for new occupations or to the education that fills leisure time with the enhancement of cultural interests. In Latin America, it is a form of education to teach survival skills to an ever-growing part of the population that lives under the "poverty line" or even in extreme destitution.¹

In the last four decades, adult education in Latin America has followed the orientations of UNESCO in shifting its emphasis from "fundamental education" to "functional education" and then from "community development" to "permanent education." Some critics (Barquera, 1982; La Belle, 1976) have shown that such emphases, promoted by UNESCO and other international agencies, were dictated by the economic changes required to adjust the development of the Latin American region to the international division of labor. The educational programs resulting from this international orientation were based theoretically on the functionalist view that all social systems are, by nature, stable and that a change in one of its components requires compensatory adjustments in all of its other elements, until it again reaches a functional equilibrium.

In the early 1970s, as a reaction to the failures of the conventional approaches to adult education, a different type of education termed "popular

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education” began to develop. Some theorists consider the origin of popular education to be the natural evolution of Paulo Freire’s ideas on consciousness raising. Still others consider the need for social mobilization and political preparation for revolutionary change as the main origin. No doubt, these and the following factors contributed to its emergence: Catholicism’s liberation theology, social analysis of the “dependency” theorists, revitalization of the neo-Marxian views of Antonio Gramsci, and the gradual realization of the importance of cultural revolutions. In one way or another, these and other factors favored the emergence of a utopian “liberation ideal” of the poor, and this gave rise to popular education (Castillo & Latapí, 1983; La Belle, 1986).

This new type of adult education has the following characteristics:

1. Popular education starts from the reality of the deprived classes, focusing on the features of their social and economic context that conditions their survival.
2. It intends to lead to a transformation process, aimed at changing the living conditions of the poor. In order to achieve this, it must promote their organization and solidarity.
3. It implies a class perspective and a political dimension. It intends to empower the poor and bring forth changes in their social position.
4. Consequently, popular education always works with groups, not with individuals. As a social process incorporating reflection and action among people with common interests and expectations, it can develop only in the context of dialogue.
5. The teacher-learner relationship is horizontal and mutual: adults learn from the facilitator, and he or she, in turn, from the adults.
6. The educational process is based on participation: The group should reach its own decisions regarding its development and the activities to be undertaken.

Popular education was the appropriate milieu for the birth of PR. Its practice led to the acknowledgment of the potential of popular groups for self-discovery. These experiences were accompanied by a theoretical effort aimed at clarifying what would become a new research approach for the social sciences. Several successive stages occurred through which the concept of PR became more refined: thematic research (the original approach of Freire, 1981); action research (Fals Borda, 1980); militant research which emphasized the political component (Darcy de Oliveira & Darcy de Oliveira, 1981); and finally, participatory research (De Schutter, 1986; Hall, 1982), which some call participatory action research.

Important contributions to this process of theoretical clarification also came from the industrialized countries, namely: “action sociology,” developed under the auspices of the School of Frankfurt (Habermas, Adorno), that questioned the conventional social research approach based on positivist and empiricist assumptions; dialectic and hermeneutical views that suggested different epistemological foundations; and new evaluation methods that emphasized qualitative aspects. In this way, several re-

searchers from Italy, Holland, the United States, and other countries made both theoretical and practical contributions to the emerging PR approach (Hall, 1982).

Characteristics of Participatory Research

PR has an eminently practical purpose: It intends to produce change. That is why some authors see its germ in Marxian reflections: Until now philosophers have tried to interpret the world; the important thing is to transform it. PR should be understood as a reaction to the futility of conventional research whose contributions to social change in less developed countries have been negligible. It intends to put into the hands of the oppressed the knowledge necessary for them to bring forth better living conditions.

Consequently, PR is carried on by the oppressed. It is contended that, organized in groups, they will discover the forces of their oppression and will undertake actions to overcome them. The role of the external educator is not to conduct the research process, only to support it as a facilitator.

While conventional research draws a clear line between *subject* (the researcher) and *object* (social reality), PR contends that researchers are part of the social reality, they affect this reality and, in turn, it affects their behavior. Therefore, subject and object are identified.

PR often is initiated with the identification of a problem that the participants have in common. The problem may be a lack of health facilities, unemployment, lack of water, or hostile attitudes of local authorities. The group tries to understand the problem by analyzing its causes. The process often challenges the generally accepted ideas and conventional explanations regarding the root causes of their reality. Gradually some alternative solutions emerge from the analytical discussion, and the group chooses one of the alternatives around which to organize its actions. As these actions are carried out, the group reflects on the outcomes, draws conclusions, and enhances its knowledge of social reality.

Within such a process, three essential dimensions may be distinguished: (a) research, that is, the gradual discovery of new knowledge (at least for the participants in the process); (b) action, as a component of the process that moves from practice to reflection and from reflection to practice; and (c) education, because the group gains a better understanding of social facts and improves its capacity for reflection and analysis.

Two problems should be noted in this regard. First, the interlinking of these three dimensions brings about a certain confusion. Some authors emphasize the research character of PR and put forth its potential value as an alternative approach to analyzing social reality. For example, Fals Borda (1980) focuses his ideas on the value of popular knowledge and proposes the development of a "popular science" that is opposed to prevailing forms of science. Other authors stress the educational dimension of PR. Its capacity for leading to new knowledge is secondary to the behavioral changes brought about in the participants.

A second problem concerns the relationship between research and action. In the practice of popular education, the cycle of reflection-action-

reflection is applied to concrete issues, mostly in a short-term perspective. This prevents a systematic integration of knowledge, which is an essential trait of the accepted notion of science.

Modes of Participation

In PR, participation is essential, but not any type of participation. We may recall that some kind of participation may be present in conventional social research, as well. One author (Rubin de Celis, 1981) distinguishes the following modes of participation in social research in general:

1. Returning information back to the people who have been studied. This form of participation is typical in community development projects. Participation in this case is limited.
2. Allowing people to participate in the collection of data. In some conventional techniques this process is aimed at inducing organization. It is also a limited form of participation.
3. Inviting people to participate in the entire research process of a particular study to be conducted by a professional researcher. Participants may modify the purpose and the general design of the study, as well as influence the interpretation of data. Even so, participation is still limited as the professional researcher maintains the ultimate control over the process and the product.
4. Incorporating people in the determination of the subject matter and participating throughout the entire process of the study. Although participation is more extensive in this case, the research process is still considered a matter for "experts."
5. Encouraging a group to take the entire research process in its own hands and carry it on through continual self-reflection. In this case, the professional researcher, if one is present, plays only a complementary role as a resource person.

Although only the last mode would be considered proper PR, it is clear that participation may take place in research at all these various levels. In practice, one may find many cases in which participatory and conventional research techniques are mixed. For this reason, some authors do not present PR as sharply opposed to empirical, quantitative research, but rather as an alternative approach that is more apt to capture qualitative aspects of reality and involve people in social action.

Participatory Research as a Reaction to Conventional Research

PR claims to be not only an educational methodology for the adult poor, but also a scientific alternative which will make social research more adequate and meaningful. What are the criticisms raised against prevailing social research? How valid are they?

Social sciences had the misfortune of being latecomers in the history of modern science. They grew up as a deliberate methodology when the natural sciences had already reached a certain degree of maturity. That is why they unconsciously strived to imitate the basic paradigm of natural science. In their effort to be considered *real* sciences, they assumed the basic

concepts, mental processes, and even methods of natural science, with little consideration that their object—social phenomena—differed from natural phenomena. (Actually, they have not been entirely successful in their ambition; *hard* scientists still consider them *soft* sciences.)

The following statements summarize the characteristics of the prevailing positivist paradigm of social research:

1. The purpose of science is the increase of knowledge; knowledge is useful for predicting and explaining events for the purpose of controlling them.
2. Reality is objective; it exists independent of observation. Scientific grasping of reality requires measures that prevent spurious influences that distort facts. Research must be *objective*.
3. Scientific research requires a method. Although there are different research methods and techniques, the research process always requires a theoretical framework, hypotheses to be tested, data collection, interpretation, revision of hypotheses, and reproducibility of findings. Only then can the accumulation of knowledge take place.
4. Evidence and findings must be expressed, whenever possible, in mathematical terms. Even the assessment of qualitative realities must be expressed in quantitative indicators, otherwise scientists are exposed to subjective biases.
5. Research is a specialized activity reserved for trained professionals.

Supporters of PR raise the following five criticisms of this paradigm as applied to the social sciences:

1. The purpose of science is not only knowledge, but also the improvement of the quality of life. Established social research has been useful only to the powerful who can pay for and use it. It rarely results in benefits for the common people.
2. In prevailing practice, research topics are chosen either by policy makers and funding agencies in accordance with their interests or by researchers influenced by motivations of professional prestige. That is why most research turns out to be irrelevant to everyday life.
3. Social facts differ sharply from natural facts in two aspects: social facts are less determinate because they are affected by human intentions, and they are necessarily altered by the researcher who approaches them. (This happens in natural science too, but to a far lesser extent.)
4. *Neutral* research of social facts is impossible. Knowledge is inevitably influenced by the prejudices, values, interests, and personal limitations of researchers. The effort to be *objective*, to establish a *distance* from social reality, often leads to overlooking essential characteristics.
5. Control of research by professionals has produced a monopoly on knowledge. Social knowledge, by its very nature, should be owned and used by ordinary people.

These are the basic criticisms raised against prevailing social research. Most PR supporters do not deny the validity and usefulness of certain methods and techniques, but they propose a fundamentally different approach to the

problem of producing and integrating social knowledge. They also contend that participation and group discussion facilitate a better understanding of social facts: first, that action oriented toward transforming reality is a great help in directing the research process; and second, that there are moral and political responsibilities in social research because knowledge belongs to the people and should be used by them for improving their lives (Barquera, 1986).

Many of these criticisms regarding established research emerged from the practice of popular education. Educational practitioners tried to close the gap between researchers and people. They encouraged the use of anthropological and historical methods which involved the participation of the community, and they developed a special concern for evaluating qualitative aspects of their educational practice. Above all, they increasingly demonstrated that ordinary people had a great capacity for understanding and analyzing their social reality.

It is not unusual to find authors who contend that PR necessarily relies on the principles of historical materialism; that it draws on dialectics to explain its epistemological foundations; that it explains the relationship between knowledge and action from the Marxian perspective of the transformation of reality through human work; and that it stresses the implications of knowledge for class struggle. However, this interpretation does not seem essential to PR, which may refer to some Marxian concepts without necessarily assuming Marxian philosophy in its entirety.

Critique of Participatory Research

An experimental proposal such as PR presents many unsolved problems and ambiguities of a philosophical, epistemological, and methodological nature (Latapí, 1986).

Philosophical Problems

The concept of science. Supporters of PR rarely define their concept of science. At times, they give the impression of accepting any type of knowledge as scientific knowledge. The examples often used refer either to the knowledge which adults develop when reflecting on concrete and local problems (lack of water, low prices for their goods, and so forth) or to their traditional knowledge (such as the history of their community, its legends and myths, health practices, or agricultural techniques).

However, not all knowledge is scientific. Scientific knowledge requires methodological rigor, theoretical foundations, validation, systematization. The "modest science" proposed by Fals Borda does not reach beyond the documentation of social facts, which would demand elaboration at a higher level in order to be scientific.

It is understandable that PR, as a reaction against contemporary social science, has an anti-intellectual component. But anti-intellectual attitudes are hard to reconcile with science. The Chinese Cultural Revolution illustrates this.

Action as a source of scientific knowledge. It cannot be denied that social action contributes to a better understanding of social reality. But it seems

excessive to consider action as the primary source of knowledge. Rarely do we find among supporters of PR detailed recording and analysis of the types of action involved. It is evident that not all types are equally relevant for producing scientific knowledge, even though they are effective for transforming reality.

Relationship between theory and practice. The dialectic principle that knowledge stems from *praxis* (that is from the synthesis of theory and practice) leads promoters of PR to suppress the distinction between doing and thinking. They overlook knowledge as having its own nature and the fact that science is centered around intellectual claims, whether or not we accept the contribution of practice to discover knowledge.

Class position and science. Some authors (especially Marxists) contend that knowledge produced by the oppressed classes is the only valid knowledge. It is certainly important that these classes elaborate a critical view of dominant knowledge from their own class perspective. But by even acknowledging that any scientific approach implies class assumptions, the validity of scientific truth cannot be tied to a particular class position without perverting the very notion of science.

Epistemological Problems

Confusion of researcher and phenomena researched. The contention that the researcher and the phenomena researched become the same thing because the researcher becomes part of the social reality is more rhetorical than real. It is true that in PR, researchers consider themselves part of the research object, but the act of knowing always implies a duality; we are knowing subject and knowing object, at least in two different moments. This distinction should not be overlooked.

Action as a criterion of truth. The proposition that action is a criterion of truth may be valid regarding political, efficiency-oriented actions, but it seems excessive to extend this claim to all social knowledge. For example, a group may study the change of the birth rate in its community and through a census reconstruct its demographic pyramid according to age groups. Which would be, in this case, the action through which the validity of the findings can be checked? It is evident that not all scientific conclusions concerning social issues can be proved through action.

In this regard, many other questions remain unanswered. What particular actions are we referring to for validity? Why is action a validity criterion? Why only action? How are we to apply the outcomes of action to certain knowledge contents?

Knowledge and power. It is a basic tenet of PR that knowledge leads to power. This is an assumption that still lacks sound theoretical explanations. What kind of knowledge? What kind of power? Besides, it seems that, along with knowledge, there are many other factors in the complex process of building up social power.

Methodological Problems

Vagueness of "participation." Many authors indulge too easily in the rhetoric of participation without due consideration to the many ways in

which participation occurs or to the different aspects of participation which should be taken into account. One should inquire about the purpose of participation, its organizational basis, the initiator of the process, the roles of the group members, the distribution and use of information, the control of the process, its rhythm and duration, the way in which consensus is reached, and so on (Zuñiga, 1986). For lack of analyses based on such considerations, PR is still far from being a rigorous research method.

Role of the professional researcher. Despite the insistence of PR supporters on having the educator or professional researcher develop a horizontal relationship to the group, in practice this is difficult to achieve. The professional researcher maintains a directive role that cannot be denied. The researchers have an overall understanding of the research process, they are more familiar with abstract thinking, and they are expected to assist the group and to provide the necessary tools. All this supports the existence of a certain superiority and entails the risk of paternalism and manipulation.

Research techniques. The practice of PR evidences another limitation. A group of adults with very little, if any, formal schooling, that tries to study an issue is able to use only simple research techniques. This is hard to reconcile with the claims of PR in achieving levels of analysis and abstract thinking that will contribute to *new* scientific knowledge.

Adoption of "conventional" research techniques. Most supporters of PR agree that this new form of research methodology may utilize some conventional research techniques, mostly quantitative ones. However, they have not established a clear criterion for selecting them. It still remains unknown why some techniques are considered compatible with the principles of PR and others are not.

Systematization and accumulation of knowledge. Finally, there is an important methodological issue as yet unresolved in PR. The process of scientific knowledge requires synthesis, systematization, and accumulation. It is a difficulty, to say the least, that PR carried out by local groups on isolated, concrete topics may reach the levels of integration and synthesis required, so as to supplant the knowledge obtained by established social research. In other words, PR may be suitable for reaching conclusions on local situations, but such conclusions require a further treatment in order to obtain broader validity.

The Basic Dilemma

There are few major objections to accepting PR as an educational methodology; it is evident that the adult poor enhance their capacity for self-analysis and organization by reflecting systematically on their practice. But it is with the contention of PR that it be considered a rigorous research procedure that uncomfortable questions arise. For some of its supporters it is an *alternative* to prevailing research, with strict academic claims. A number of theorists contend it is an emerging paradigm which will revolutionize social science. There are even a few who speak of a *popular science* which will supplant conventional social science. These claims identify the central issue: Is it valid to consider PR as an alternative paradigm capable of redirecting so-

cial research in the future? Or is it only a fad to be dismissed, more rhetorical than solid in its tenets?

Let us recall Kuhn's (1971) views on scientific paradigms. For him a paradigm consists of a set of principles, categories, and assumptions which regulate research activities during a certain period of time and provide models and tools to the scientific community. In the development of modern natural science he observes a succession of such paradigms. When a dominant paradigm begins to prove unsatisfactory due to growing numbers of anomalies, a new paradigm emerges and finally replaces the preceding one. This change he calls a "revolution" for two reasons that are similar to the way political revolutions occur. First, a feeling of growing dissatisfaction must precede and prepare for the change, and second, this change must challenge the institutions which sustain present research activities. Dissatisfaction with the prevailing paradigm may come either from criticisms of the theory itself that no longer explain the facts, or from the realization that the topics being researched are no longer relevant.

In my opinion, the insufficiencies of PR that were discussed concerning the concept of science, the relationship between action and knowledge, and the relationship between theory and practice, tend to dismiss the notion that PR is a new scientific paradigm.

This does not mean, however, that all of its elements are to be dismissed. Established social research can learn some important lessons from PR, such as the following:

1. Social facts differ from natural facts; they are not *given* but they are socially constructed through the interaction of people, and hence they are less determinate.
2. The pretension of being *neutral* in the approach to social reality is unsupportable; values necessarily permeate and condition our knowledge to a much larger extent than in natural science.
3. There are many important elements in social reality such as feelings, values, or intentions of people that influence social processes. To understand these elements, qualitative approaches are needed, even if the findings cannot be expressed quantitatively.
4. Personal involvement and even commitment of the researcher to the people do not necessarily hamper research objectivity; it may, in fact, enhance it by bringing the researcher closer to the social actors.
5. *Applied* social research should be concerned with the transformation of reality. The researcher who does this type of research should offer its findings to the people responsible for carrying out such transformation.
6. People's participation in the research process should be fostered whenever possible; often it upgrades the quality of the knowledge obtained and contributes to making it useful for all participants.

These six lessons imply a profound revision of prevailing social research practice. In fact, they imply a criticism of the positivistic approach dominant in contemporary social science. But this criticism has not yet led

to construing an alternative research paradigm, as contended by some supporters of PR.

Note

1. About 40% of the Latin American population (112 million people) live under the “poverty line”; that is, they do not have the capacity to minimally satisfy their basic needs, and 19% (53 million) live “in destitution,” which means they cannot satisfy their basic nutritional needs (Altimir, 1979).

References

- Altimir, O. (1979). La dimensión de la pobreza en América Latina. *Cuadernos de la CEPAL*, 27, Santiago.
- Barquera, H. (1982). Las principales propuestas pedagógicas en América Latina. In A. Castillo & P. Latapí (Eds.), *Lecturas sobre educación de adultos en América Latina* (pp. 13-38). Patzcuaro, Mexico: CREFAL.
- Barquera, H. (1986). Una revisión sintética de la investigación participativa. In C. Picón (Coord.), *Investigación participativa: Algunos aspectos críticos y problemáticos* (pp. 33-72). Patzcuaro, Mexico: CREFAL.
- Castillo, A., & Latapí, P. (1983). *Educación no formal de adultos en América Latina: Situación actual y perspectivas*. Santiago: UNESCO-OREALC.
- Darcy de Oliveira, M., & Darcy de Oliveira, R. (1981). Pesquisa social e ação educativa. In C. Brandão (Ed.), *Pesquisa Participante* (pp. 17-33). São Paulo, Brazil: Editora Brasiliense.
- De Schutter, A. (1986). *Investigación participativa: Una opción metodológica para la educación de adultos*. Patzcuaro, Mexico: CREFAL.
- Fals Borda, O. (1980). *Theoretical aspects of participatory action research: Reflections on the meaning and role of science in people's participation*. Paris: UNESCO (3274-ETD-31).
- Freire, P. (1981). Criando métodos de pesquisa alternativa. In C. Brandão (Ed.), *Pesquisa participante* (pp. 34-41). São Paulo, Brazil: Editora Brasiliense.
- Hall, B. (1982). Breaking the monopoly of knowledge: Research methods, participation and development. In B. Hall, A. Gillette, & R. Tandon (Eds.), *Creating knowledge: A monopoly?* New Delhi: Society for Participatory Research in Asia.
- Kuhn, T.S. (1971). *La estructura de las revoluciones científicas*. Mexico: Fondo de Cultura Económica.
- La Belle, T.J. (1976). *Nonformal education and social change in Latin America*. Los Angeles: UCLA Latin American Center.
- La Belle, T.J. (1986). *Non-formal education in Latin America and the Caribbean: Stability, reform or revolution?* New York: Praeger.
- Latapí, P. (1986). Algunas observaciones sobre la investigación participativa. In C. Picón (Coord.), *Investigación participativa: Algunos aspectos críticos y problemáticos* (pp. 125-131). Patzcuaro, Mexico: CREFAL.
- Rubin de Celis, E. (1981). Investigación científica vs. investigación participativa: Reflexiones en torno a una falsa disyuntiva. In O. Fals Borda et al. (Eds.), *Investigación participativa y praxis rural* (pp. 121-136). Lima: Mosca Azul.
- Zuñiga, L. (1986). *La investigación participativa: Antecedentes para una consideración crítica*. In C. Picón (Coord.), *Investigación participativa: Algunos aspectos críticos y problemáticos* (pp. 87-124). Patzcuaro, Mexico: CREFAL.

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Framework for a Comparative Study of Adult Education Policy Implementation in Mexico, Tanzania, and Alberta¹

The authors describe a comparative study of adult education policy implementation underway in Alberta, Mexico, and Tanzania. They outline the rationale and research dimensions of the project. An explanation is given of how the world view and values (system of meanings) of policy makers, adult education teachers, and adult learners will be examined. Provisions for analyzing structures of communication, channels of participation, policy planning rationales, and self-assessments of the impact of adult education programs on development are also noted. Some of the assumptions and research questions guiding the study are identified.

Research in adult education tends to be aggregative and “technicist oriented” with a narrow focus. These features characterize an otherwise commendable study by Bhola (1984) and are the most frequently heard criticisms of similar comparative research carried out in adult education to date (Bacchus, 1976; La Belle, 1986; Wagner, 1986). An analysis of the values and expectations of the different actors involved in the process of policy making and program development is usually neglected. This article describes a research project that seeks to overcome this shortcoming by examining the world view and values of policy makers, adult education teachers, and adult education clientele in order to discern how these values are reflected in policy making activities and program development with regard to adult education—especially in relation to the clients’ expectations.

Initially, it may appear that the research project falls within the realm of what has been traditionally defined as studies of political culture. But this is not the case. In political science, the notion of political culture largely originates from a liberal, pluralist, and functionalist/theoretical approach. This approach has been presented in the book by Almond and Verba, *The Civic Culture* (1963), which has become a paradigmatic work, especially in terms of elucidating the concept of political culture. An attempt to further the use of the concept of political culture for comparative political studies is

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made in Pye and Verba's *Political Culture and Political Development* (1965). Political culture is defined as the particular pattern of orientation in which every political system is embedded. As Verba states, the political culture "consists of a system of empirical beliefs, expressive symbols, and values which define the situation in which political action takes place" (Pye & Verba, 1965, p. 513).

In this research project, however, the notion of political culture is considered to be instrumental. It does not consist merely of a system of ideas and representations, or simply a system of cognitive-emotional patterns. It also involves a series of *material practices*, as Poulantzas, from a diametrically opposed perspective, argues. The political culture embraces "the customs and lifestyle of the agents and setting like cement in the totality of social (including political and economic) practices" (Poulantzas, 1978, p. 28). This investigation also differs from studies in political culture in that it relies on neither traditional attitudinal survey research nor the measurement of values through attitude scales. A more qualitative approach including intensive interviews is used to examine these variables.

Furthermore, this study is different in scope and objectives from an investigation that attempts to analyze policy making from the perspective of organizational studies and input-output studies. It departs as well from a conventional socio-functional analysis of policy making (e.g., based on the notion of the black box) and from the type of social-conflict analysis advanced by postpluralist political scientists and economists of education (Carnoy & Levin, 1985). Rather, the central concern of this research is to examine whether the perceived goals of adult basic education and skill upgrading programs differ from one group of "actors" to another in Mexico, Tanzania, and Alberta.

Site Selection and Approach

Why were these three research settings selected for comparison? The most important criteria for selecting these three societies were their different socio-economic and political features. According to the CIDA's recently released map, "A Developing World," and based on a United Nation's classification, Mexico is characterized as a *developing country* with 82,964,000 people, a gross national product (GNP) per capita of \$2,080 US, and a life expectancy at birth of 67.2 years. Tanzania, on the other hand, with a much smaller population (24,186,000), a gross national product per capita of \$270 U.S., and a life expectancy at birth of 41.9 years is considered among the *least developed countries*. Finally, Canada, with a population of 25,963,000, a GNP per capita of \$13,670 US, and a life expectancy at birth of 76.3 years is defined as a *developed country*. From a different theoretical perspective, based on Wallerstein's World System Approach, Canada is identified as a *core country*, Mexico as a *semi-peripheral country*, and Tanzania as a *peripheral country* (Chirot, 1977, pp. 6-11, 137-140, 208-214).

In political terms, Canada is a parliamentary democracy with pluralist party competition. Mexico is formally a parliamentary democracy but with a dominant ruling party. The Institutionalized Revolutionary Party (PRI) has consistently gained a substantial majority and held the reins of power, na-

tionally and provincially, for the last 60 years. Tanzania, with a monoparty system, has defined its model of political development as one of self-reliance, sometimes considered to be a kind of fabian-socialist model (Unsicker, 1987).

A striking fact to any adult educator is the relatively high quality of adult education programs and experiences in the three countries. This observation gave rise to the general questions which helped to launch this inquiry. Why have these societies, despite the differences in their socio-economic structure, political culture, institutional history, and modes of governance, achieved such outstanding standards in their adult education programs? Do they have a common core of problems that they still need to address in literacy training, adult basic education, and skill upgrading programs?

In the case of literacy training and adult basic education in Mexico and Tanzania, their example has been influential in other countries. Mexico undertook one of the first successful mass literacy campaigns of this century. Although evidence is scarce, there is reason to believe that the Mexican literacy campaign of 1944-1946 that made 1,134,419 persons literate was influential in the design and the organization of the Cuban campaign, which is considered by many as one of the most successful in Latin America. Also, the involvement of Jaime Torres Bodet (who, as Minister of Education, was the mastermind behind the Mexican campaign) in the founding of UNESCO probably influenced the earlier stages of UNESCO's orientation toward literacy training. Tanzania's mass literacy campaign, as reported in Bhola (1984), was one of the most successful experiments in literacy training in the World Experimental Plan for Literacy of UNESCO. The speeches and writings of Tanzania's former President, the philosopher Julius Nyerere, have been highly inspirational and influential in international circles (Nyerere, 1973). Due to his contributions to adult education, Nyerere was invited to be the first honorary Chairperson of the International Council of Adult Education (ICAE) based in Toronto. Former Mexican President Luis Echeverria has most been recently appointed honorary Chairperson of ICAE.

Accordingly, a study of these three countries, with great diversity in their socio-cultural and economic milieu but which share high standards in their adult education programs and similar problems, can provide valuable insights for practitioners and scholars engaged in developing adult education projects. Adult education, as a field for experimentation, practice, and research, is an international field. Yet rarely has there been an in-depth comparative analysis like this one.

Research Focus

Focusing on the expectations and values as well as on the roles of social actors—policy makers, teachers, and learners—in adult education policy formation and program development should yield insights about many aspects of this process. For example, although it may not be possible to identify in detail the actual process by which policies emerge and programs are

developed, it will be possible to pinpoint where the exchanges and interactions occur between different social actors in the institutions that are responsible for the implementation of adult education policies. Similarly, it will be possible to clarify the main channels of communication and how the process of feedback is established. Moreover, this focus facilitates the assessment of the goals and expectations of the clientele, their degree of satisfaction or dissatisfaction with the programs, and the self-perceived short-term economic returns of adult education.

Thus the study seeks to identify the real links and relationships between three different sets of social actors in adult education. It will attempt to determine the extent to which problems in this interaction ("noises" in the communication among themselves as well as contradictory values, goals, and objectives) could explain what are perceived as inconsistencies in the planning and operation of these programs (Bhola, 1984). Consideration will also be given to the relationship between the structure of communication and the level of satisfaction or frustration of the clientele with the cognitive and social outcomes of the programs. Some evidence derived from self-assessment will be offered about the perceived value of the skills and cognitive knowledge that are expected to accrue from literacy training, skill, and general education upgrading programs in Alberta, Tanzania, and Mexico. Finally, the study proposes to analyze the short-term changes, if any, which have occurred in the clients' lifestyles as a result of their participation in the various programs.

Obviously, this investigation will not yield a complete and systematic picture of the overall process of policy making. Our efforts will center on the different social actors, their expectations and value orientation,² and the interactions (contradictions, conflicts, basic agreements) among them. The study of this interaction will not involve a role-status or a psychological-attitudinal approach. Instead, it will focus on the actors' world views (e.g., behavioral ethics, language patterns, and linguistic style) as three sharply differentiated "cultural capitals."³ On the basis of empirical research in Latin America and the Caribbean (Arnove, 1987; La Belle, 1986; Torres, 1987), it is anticipated that in addition to opposing value orientations in the different social actors in adult education, there will be contrasting cultural capitals interacting in the same set of institutions and programs (Carney, 1984).

The underlying assumption is that personal goals and values of individuals (actors) in different roles in adult education, as well as alternative cultural capitals, will make a difference in the way that the system is organized and operates. In this regard, the study has the limitation that it is not designed as a historical-chronological analysis. However, it offers a photographic presentation of contemporary adult education and how programs in this field are developed as seen through the lenses of three groups of social actors over a two year period who have experienced three different programs in the varied social settings of central and northern Alberta, and in rural and urban areas in Tanzania and Mexico. Such a microanalysis provides many opportunities to gain a variety of insights into

the policy making process and to determine the influence of the variables involved. It should illuminate where the emphasis ought to be placed in a more structural-institutional analysis of policy in the future, and perhaps how to use qualitative and quantitative approaches to complement historical and political analysis of aggregate data.⁴

Theoretical Approach and Research Dimensions

Target groups for this research are adult education policy makers, teachers, and adults enrolled in selected programs of literacy training, skill upgrading, and general education programs in Canada, Tanzania, and Mexico. Policy makers are the top officials in charge of the institutions, including those responsible for setting up the programs and making the decisions (from routine administrative decisions to the policy decisions of establishing and implementing the program). Adult education teachers are those persons instructing in the different programs that are examined in various communities. They include professional and paraprofessional teachers as well as volunteer instructors. Care will be taken to sample both the more experienced and the less experienced instructors. The adult education clientele is drawn from the students enrolled in the selected programs who are predominantly working class and native people.

The following information will be gathered about policy makers: (a) social background and profile,⁵ (b) system of meanings and values, (c) ideology or world view,⁶ (d) policy planning rationale,⁷ (e) knowledge of adult education as a field of study, (f) cultural capital, and (g) perceptions of adult education and its contribution to national development.

The notion of cultural capital is important to the study and warrants some clarification. Following Pierre Bourdieu (1977), cultural capital could be considered: (a) a number of meanings and values, (b) qualities or styles of social and cultural interaction, (c) modes or patterns of thinking, or (d) types of dispositions that are constituted in the system which give origin to the "habitus" of an individual. Accepting the theoretical construct of cultural capital, how can a policy maker's cultural capital be described? How does it differ from that of the other two target groups?

Meanings and values will be assessed using Kluckhohn's (1961) analysis of value orientation. *Quality of social and cultural interaction* will be detected through interviewing about social networking, family relationships, institutional affiliations, and the like. *Modes or patterns of thinking*, perhaps the more difficult to assess without a quasi-experimental research design and comprehensive historical analysis (structural biographies or life stories), will be discerned from responses to hypothetical scenarios on basic issues in policy planning such as funding alternatives, mechanisms for increasing motivation, and the participation of learners in the process. The concept of habitus is perhaps the most complex of those proposed by Bourdieu because it demands an historical-structural analysis rather than taking the individual as the unit of analysis. In view of the complexity of this meaning of cultural capital, it will not be utilized.

Similar dimensions of analysis will be applied with respect to teachers including their (a) socio-economic and cultural background; (b) views about curriculum, methods of instruction, and inservice training; (c) expectations about adults as learners and about their educational and occupational future; and (d) current teaching practices.

The clientele of "policy takers" will be interviewed to ascertain their (a) reasons for becoming involved in the program; (b) educational and occupational aspirations (including perceived value orientations); and (c) self-assessment of the returns which they have received as a result of their participation in an adult education training program, particularly in connection with their income levels, upward job mobility, communication skills and lifeskills, and socio-political consciousness.

Finally, assessments will be made of the (a) economic returns of adult education training that have been provided, (b) different factors that account for the "educability" of the types of participants in these programs; and (c) shortcomings of the adult education system regarding the needs of the students.

Research Questions and Assumptions

The assumptions and research questions giving direction to this three-country study fall into four categories. Some examples follow.

Cultural Capital of Social Actors

It is assumed that there will be significant class differences in terms of: (a) the actors' perceptions of the usefulness of adult education and its economic social returns and (b) in the overall *cultural capital* of each social group. These differences may emerge as discrepancies between the *world view* of the three groups of respondents in each country. Moreover, it is assumed that the largest differences in values and perceptions will not be between the policy makers and the other two groups, particularly the clientele. A number of questions arise from these two assumptions.

First, to what extent and in what ways would the different perspective of the policy makers be expressed in policy decisions? Would their policy decisions take into account the other actors' self-perceived goals or would they use a bureaucratic and/or political rationale which might differ sharply from the rationale of the other groups? Second, to what extent would such differences help to explain problems in communication between actors at different levels of the system as well as inconsistencies in their perceptions about what was planned, implemented, and achieved? Third, will changes occur in the actors' perceptions during the course of the investigation? If so, what kinds of changes took place and how did they influence or alter the policy process, programs, communications, expectations, and outcomes?

Policy Rationales and Policy Makers

It is expected that the explanations for organizing the particular adult education programs to be examined in the study will be similar to one or more combinations of the following reasons that have been systematically discussed elsewhere (Torres & Unsicker, 1987): (a) these programs are the

state's response to explicit needs and demands expressed by the adults themselves or voiced by organizations such as the church or interest groups on behalf of the larger society; (b) they represent the implementation of a constitutional mandate for the state to supply education to adult citizens as part of its responsibility to expand and improve educational opportunities for all; (c) they are part of a state strategy to use policy planning in adult education to solve social problems such as poverty, unemployment, and the like;⁸ and/or (d) they represent an educational investment by helping people to become better trained and thereby improve their chances in the labor market.

A further assumption is that there will be substantial similarity in the explanations advanced by adult education policy makers in Alberta, Mexico, and Tanzania irrespective of their organizational affiliation or expertise.

Teachers' Roles and Perceptions

It has long been accepted that the quality of adult education depends in large measure on the quality of inputs. Particularly crucial is the nature of the teaching force—their training, motivation, commitment, and experience, as well as the extent of their involvement in the decision making process. However, this study is built on two assumptions that run contrary to this pervasive belief: (a) teachers in adult education programs are seldom systematically consulted in the decision making process and (b) the experience teachers accumulate from working in adult education programs is rarely taken into account in policy making.

Based on these twin assumptions, six hypotheses will be explored. First, that marked differences in the cultural capitals of policy makers and teachers will result in ineffective communication between these two groups. Second, that teachers who work directly with the native population or in rural areas will evidence a higher degree of dissatisfaction with the consultation processes and with the hierarchical structures in adult education than do teachers who work in urban settings and/or with a more diverse clientele. Third, that adult education teachers will tend to see their activity as "second class" because it is a second-chance education for individuals who have failed to do better within the formal system (Jarvis, 1985). Fourth, that teachers in non-native rural settings will be more satisfied with the way the programs are planned and implemented than those working with native rural populations, but they will be less satisfied than teachers in the urban settings. Fifth, that teachers who are younger and relatively "new" in the system will perceive themselves as having a stronger commitment to adult education than those who are older and more experienced. Sixth, that despite differences in their cultural capital and participation in the policy making and program development process, teachers will differ little from policy makers in the way that they define and explain the policy planning rationale for adult education programs.

Clients' Expectations and Perceptions

It is assumed that the clientele of academic and skill upgrading will share one characteristic in common: they are likely to be members of the less ad-

vantaged groups, perhaps among the poorest in the societies selected for study. Thus the project will attempt to determine whether these persons do look on adult education as a way out of their present economic and social situation. Because it has been argued that adult education is more likely to be a means for social mobility in urban areas and among those that are employed and have more stable and secure jobs (La Belle & Verhine, 1976), this hypothesis will also be tested. A third related hypothesis is that the reasons given by clients for enrolling in programs will differ from those advanced by policy makers, and perhaps even by teachers, about why these individuals chose to enroll.

In addition to examining these three hypotheses, many other aspects of the clients' expectations and perceptions will be addressed. These include, for example, assessing their degree of satisfaction with the programs as well as determining how their assessments compare with those of policy makers and teachers; gathering their opinions about the value of the skills and knowledge they have gained and the use being made of them; and ascertaining if they have experienced improvements in income, occupational mobility, quality of life, and the like.

Concluding Comment

This research is designed to yield more than policy prescriptions. It will also address policies within the more theoretical debate of the dialectics between systems and structural constraints in adult education vis-à-vis the transformative role of human agency including its limits and possibilities in the social and educational contexts of the study (Anyon, 1981; Aronowitz & Giroux, 1985). This does not imply a naive perspective or lack of knowledge of the structural constraints that policy makers face in increasingly bureaucratized, routine-oriented state structures. Rather, it reflects the belief that even in highly-complex organizational systems there is always some room for movement toward a more participative policy planning process in adult education that will help to expand the degrees of freedom for individuals and facilitate the development of contemporary societies.

Notes

1. The research project on Adult Education Policy Implementation is financed by the International Development Research Centre, Ottawa, with contributions from the University of Alberta, the University of Dar es Salaam (Tanzania), and the Center for Educational Research (CER Mexico).
2. The research on values in sociology of education has focused on the notion of values-orientation developed by Kluckhohn. These are defined as "complex but definitely patterned ... principles ... which give order and direction to the ever-flowing stream of human acts and thoughts, as these relate to the solution of common human problems" (cited in Banks, 1968, p. 81).
3. This notion of cultural capital, which has been popularized by Bourdieu's writings, refers to the
different sets of linguistic and cultural competencies that individuals inherit by way of the class-located boundaries of their family. A child inherits, from his or her family, those sets of meanings, qualities of style, modes of thinking, and types of dispositions that are assigned a certain social value and status in accordance with what the dominant class(es) label as the most valued cultural capital. (Aronowitz & Giroux, 1985, p. 80)

4. Because we attempt to combine the structuralist notion of cultural capital and habitus with the more psychological behavioral-oriented concept of value orientation, some epistemological problems may arise. For instance, is it possible that an individual may share a given value orientation that may not be expected taking into account his or her cultural capital? The problem has two main parts: (a) Are these two notions so distinct in their theoretical construct and empirical expressions to have no analytical value when integrated in the same analytical framework? and (b) Is cultural capital (which has always been defined in the context of structural analysis) measurable using conventional empirical methods?
5. Includes an analysis of their job experience, education, and family background.
6. The debate about what constitutes an ideology or whether ideology and a so-called world view could be synonymous is widespread. In this inquiry, ideology is neither understood as a synonym for culture nor simply as class-consciousness or false consciousness. Initially, a working definition of ideology that comes close to the more common notion of world view will be adopted.
7. According to Goulet (1986), a rationale is an instrumental guide for action. He has distinguished three different practical rationales: a political rationale, a technical rationale, and an ethical rationale. The question to be answered is: What rationale prevails in designing and implementing these programs?
8. Henry Levin (1980) offers a forceful analysis of this technocratic approach to planning.

References

- Almond, G., & Verba, S. (1963). *The civic culture*. Princeton, NJ: Princeton University Press.
- Anyon, J. (1981). Schools as agencies of social legitimization. *Journal of Curriculum Theorizing*, 3(2), 86-103.
- Arnone, R. (1987). *Education and revolution in Nicaragua*. New York: Praeger.
- Aronowitz, S., & Giroux, H. (1985). *Education under siege*. South Hadley, MA: Bergin & Garvin.
- Bacchus, M.K. (1976). Some observations on social structure and craft training in economically less developed countries. *Canadian and International Education*, 5(2), 109-123.
- Banks, O. (1968). *The sociology of education*. Guilford: Billing and Sons.
- Bhola, H. (1984). *Campaigning for literacy*. Paris: UNESCO.
- Bourdieu, P. (1977). *Outline of a theory of practice* (R. Nice, Trans.). New York: Cambridge University Press.
- Carney, R.J. (1984). Toward a history of schooling. *Curriculum Inquiry*, 43(3), 293-301.
- Carnoy, M., & Levin, H. (1985). *Schooling and work in the democratic state*. Stanford: Stanford University Press.
- Chiot, D. (1977). *Social change in the twentieth century*. New York: Harcourt Brace Jovanovich.
- Goulet, D. (1986). Three rationalities in development decision making. *World Development*, 14(2), 301-317.
- Jarvis, P. (1985). *The sociology of adult and continuing education*. London: Croom Helm.
- Kluckhohn, R.R., & Strodtbeck, F.L. (1961). *Variations in value orientation*. Chicago: Row, Peterson.
- La Belle, T.J. (1986). *Non-formal education in Latin America and the Caribbean: Stability, reform, or revolution?* New York: Praeger.
- La Belle, T.J., & Verhine, R. (1976). Educación no-formal y estratificación ocupacional: Implicaciones para América Latina. *La Universidad en el Mundo*, 3(14), 7-27.
- Levin, H. (1980). Workplace democracy and educational planning. In *Education, Work and Employment: Vol. 2* (pp. 127-156). Paris: UNESCO.
- Nyerere, J.K. (1973). *Freedom and development*. Dar es Salaam: Oxford University Press.
- Poulantzas, N. (1978). *Poder político y clases sociales en el estado capitalista*. Mexico: Siglo XXI Editores.
- Pye, L.W., & Verba, S. (1965). *Political culture and political development*. Princeton, NJ: Princeton University Press.
- Torres, C.A. (1987). *Toward a political sociology of adult education: An agenda for research on adult education policy making*. CIED Occasional Paper, Department of Educational Foundations. Edmonton: University of Alberta.

- Torres, C.A., & Unsicker, J. (1987, February). *Adult education as political education*. Paper presented to the International Congress on Political Education, Villahermosa, Tabasco, Mexico.
- Unsicker, J. (1987). *Adult education, socialism and international aid in Tanzania: The political economy of the Folk Development College*. Doctoral dissertation, Stanford University.
- Wagner, D. (1986). Book Review. *Comparative Education Review*, 2, 450-454.

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THE EDITOR'S PAGE

Rules for Reviewers

This issue marks the end of my four-year term as Editor. That I found the preparation of the 16th issue as interesting and as enjoyable as the first one is attributable to the splendid cooperation and assistance received from so many people—authors, the staff of Publication Services, consulting editors, members of the Faculty Advisory Committee, and those unsung heroes, our reviewers.

Each year about a hundred different persons act as reviewers of manuscripts submitted to *AJER*. They undertake this professional responsibility willingly and perform it admirably. They serve anonymously without compensation. Their satisfaction comes from helping others in advancing knowledge of the educational enterprise. Their reward for doing a good job is to be asked to do it again. Reflecting on my experience with the peer review process and the dedicated people who make it work leads me to propose some rules for prospective reviewers.

Be thorough. Read the entire manuscript to sense its logic and flow. Then look for answers to questions like these: Is the rationale of the study apparent and the purpose clearly stated? Are the data sources, data collection, and data analysis procedures described and appropriate? Are the findings and conclusions unambiguous, valid, and meaningful? Is the relationship of the investigation to the work of others clarified? Report your answers to such questions.

Consider significance. Always comment on the theoretical and/or practical importance of the research question or topic. What kind of impact is it likely to have on the activities, behavior, or work of others?

Highlight strengths. Few manuscripts have no redeeming features. Find the good points and mention them. Most authors will undertake to revise their work when they believe they are building on strength.

Offer advice. Help the author ready the manuscript for publication by providing suggestions for additions, changes, and deletions. In addition to editorial revisions, you may be able to identify some appropriate statistical procedure. Similarly, you may be able to put forward an alternative or expanded interpretation of the findings. Authors are usually very appreciative of and quite responsive to the advice received.

But the most important rule of all for reviewers to remember is the *golden rule*—do unto others as you would have them do unto you.

This latter rule also applies to editors. Because my successor Tom Maguire practiced this in his previous role as Associate Dean (Graduate Studies and Research), I am confident *AJER* will prosper under his editorship.

W.H.W.

RODNEY A. CLIFTON

and

LANCE W. ROBERTS

University of Manitoba

Social Psychological Dispositions and Academic Achievement of Inuit and Non-Inuit Students

This study examines the differences between Inuit and non-Inuit students in activism, self-concept of ability, and academic achievement. Activism and self-concept of ability are designated as intervening variables between ethnicity and academic achievement. The results show that Inuit students have lower activism and self-concept of ability scores than non-Inuit students. Moreover, these two social psychological dispositions account for a large part of the effect ethnicity has on academic achievement. We suggest that these results have implications for the teachers of Inuit students. Specifically, this evidence lends support to Kleinfeld's (1975) suggestion that effective teachers of Inuit students create emotionally warm and personalized classroom environments, while demanding high academic achievement. In doing so, teachers may positively affect students' activism and self-concept of ability which, in turn, may enhance academic achievement.

A persistent theme concerning the education of Inuit students is their relative lack of success. Compared to non-Native students, Inuit students generally have lower achievement on standardized tests, are usually behind in their age-grade placement, and are more likely to drop out of school (Clifton, 1972, 1977; Finley, 1983; Honigmann & Honigmann, 1970, pp. 176-205; Kleinfeld, 1975, 1979; Vernon, 1966, 1984).

The limited research literature that is available suggests that social psychological factors account, to some degree, for the underachievement of Inuit students. This literature suggests that Inuit students are probably treated differently from non-Inuit students by their teachers, and this leads to their underachievement. Kleinfeld (1975), for example, reports that this process is similar to that illustrated in the classic study of formal education among the Sioux by Wax, Wax, and Dumont (1964). In this case, the teachers routinely disparaged the Sioux culture because they assumed that their mission was to reform the students by teaching the manners of white society as moral absolutes. The Sioux students responded, both psychologically and sociologically, to this type of treatment. The deprecation of their culture affected the students' psyches and was evident in low self-concepts

Dr. Clifton is a member of the Department of Educational Administration and Foundations, and his interests are in the areas of ethnicity and teacher education.

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of ability. The students' social response took the form of group solidarity based on passive resistance. They formed a tightly integrated group that refused to actively participate in classroom work. The result is what many observers have reported—shy, withdrawn, self-effacing, nonparticipating Native students who individually display a *mask of silence* and who collectively constitute the *silent classroom* (Bienvenue, 1978; Clifton, 1977; Franklyn, 1974; Hawthorn, 1967; Kleinfeld, 1979; Rampaul, Singh, & Didyk, 1984; Wax, Wax, & Dumont, 1964). In short, the literature suggests that differences between Inuit and white students are displayed in terms of the students' self-concept of ability and their activism. This implies that Inuit students generally have lower assessments of their potential and have less active dispositions toward education, which together produce lower academic achievement.

At the same time, it may be suggested that the differences between Inuit and white students may reflect differences in socioeconomic status rather than in culture. This seems plausible because Native people generally have low socioeconomic status (Clifton, 1977; Fuchs & Havighurst, 1973; Hawthorn, 1967; Taylor & Skanes, 1976). Thus it is relevant to take socioeconomic status into account when examining the effects of ethnicity on self-concept of ability, activism, and academic achievement. Similarly, some studies suggest that the sex of the students, as well as the length of time the students have been in school, must be controlled (Clifton, 1975; King, 1967; Wolcott, 1967). It is suggested that the adverse effects of ethnicity on self-concept of ability, activism, and academic achievement may differ by sex and may increase as Native students spend longer periods of time in unsupportive educational environments (Barnes & Vulcano, 1982; Clifton, 1975, 1977; Hawthorn, 1967; King, 1967; Rampaul, Singh, & Didyk, 1984; Toohey, 1985a, 1985b; Wolcott, 1967).

From this research literature we have developed a theoretical model which guides our study (Figure 1). In this model, ethnicity, sex, years of school, and socioeconomic status are designated as independent variables; activism and self-concept of ability are designated as intervening variables; and academic achievement is designated as the dependent variable. This exploratory study expands on previous research by taking into account several relevant variables such as socioeconomic status, sex, and years of school that have been considered in isolation in previous studies. As a result, we can distinguish, for example, between the effects of ethnicity and the effects of socioeconomic status on activism and self-concept of ability and academic achievement of Inuit students. Moreover, we can distinguish between the direct and the indirect effects that ethnicity has on academic achievement.

Methods

Variables

Data on all seven variables included in this model were collected from a survey questionnaire and an achievement test completed by students in two northern schools. Three of the independent variables—ethnicity, sex, and years of school—are coded in a straightforward manner. Ethnicity is coded

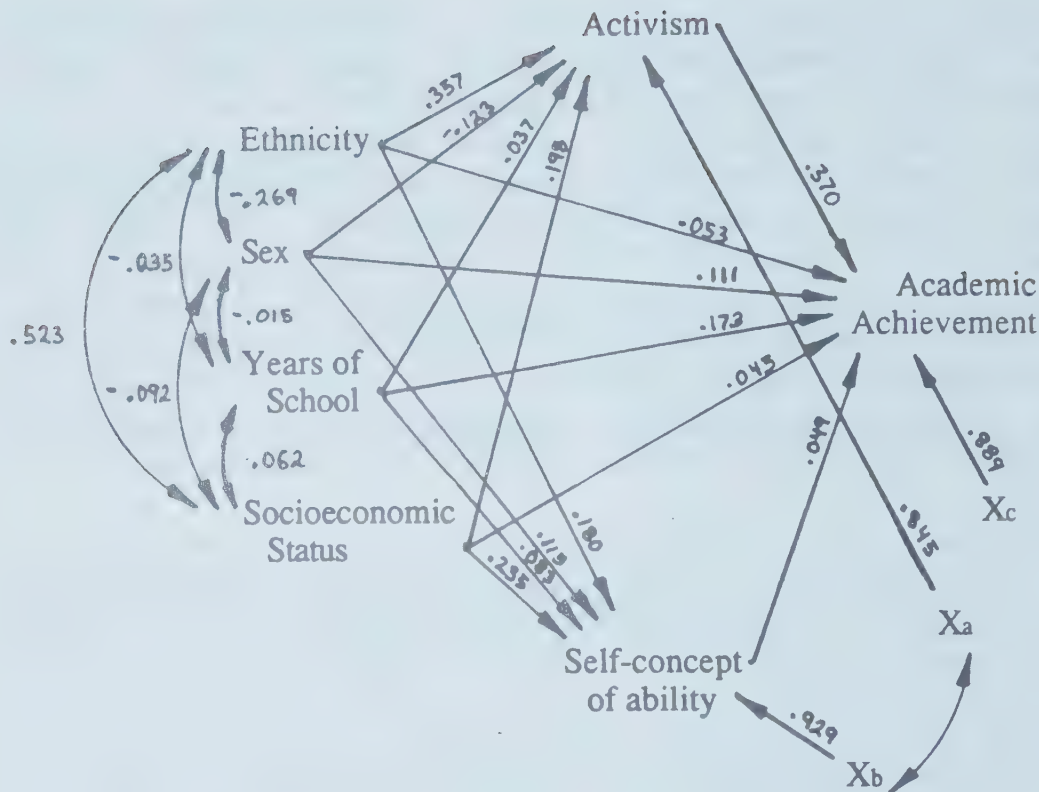


Figure 1: The path model representing the strength of the relationships between the independent, intervening, and dependent variables

as 1 for Inuit and 2 for non-Inuit, sex is coded as 1 for males and 2 for females, and years of school is coded as the actual number of years a student had been enrolled. The other four variables—academic achievement, activism, self-concept of ability, and socioeconomic status—have the following more complex operationalizations.

Academic achievement. Constructing a measure of academic achievement is problematic, particularly because it is difficult to separate the effects of English competence from academic achievement. Several studies report that Inuit and other Native students score lower on English verbal ability tests than non-Native students (Clifton, 1977; Kleinfeld, 1979; MacArthur, 1973, 1978; Marjoribanks, 1972; Mueller, Mulcahy, Wilgosh, Watters, & Mancini, 1986; Toohey, 1985a, 1985b; Vernon, 1966, 1984). In particular, these studies suggest that Inuit students have difficulty understanding and participating in classroom activities because they lack English competence, which contributes to their high failure and drop-out rates. Nevertheless, English has, and continues to be, the principal language of instruction and evaluation in most northern schools (Toohey, 1985b). For the purposes of this study, English competence and academic achievement are combined into a measure of academic achievement.

The academic achievement scale is derived from a test of 40 word pairs which were arranged so that students had to indicate whether they were synonyms or antonyms. The test was originally developed by the Interna-

tional Association for the Evaluation of Educational Achievement (Comber & Keeves, 1973, pp. 393-394; Thorndike, 1973, p. 17) and has been administered to samples of 10-year-old students in 15 countries. The Kuder-Richardson reliability coefficient of the test is .84, which is similar to the reliability coefficients reported for students in other countries (Thorndike, 1973, p. 58).

Activism. This scale was derived from Kahl's (1965, 1968) and Inkeles' (Inkeles & Smith, 1977) instruments to measure social psychological dispositions related to modernity and refers to planning for a predictable future (Roberts, Clifton, & Wiseman, in press). This scale was composed of four items: Planning only makes a person unhappy, since your plans hardly ever work out; Making plans only brings unhappiness because the plans are hard to fulfill; With things as they are today, an intelligent person ought to think only about the present, without worrying about what will happen tomorrow; and It doesn't make much difference whom people elect to government, for nothing will change. These items were coded on five-point scales from *completely agree* to *completely disagree*. Item-total correlations range from .26 to .48, and the alpha reliability coefficient for the scale is .61.

Self-concept of ability. This scale was derived from Brookover's Self-Concept of Ability Scale (Brookover, Beady, Flood, Schweitzer, & Wisenbaker, 1979, p. 207). The scale, as used in this study, is composed of four items: I feel that I am as able as my best friends to get good marks; I feel that I am able to go on to university; I feel that I am as able as my classmates to get good marks in school; and I feel that I am able to complete high school. These items were coded on five-point scales from *completely disagree* to *completely agree*. Item-total correlations ranged from .27 to .44, and the alpha reliability coefficient for the scale is .57.

Socioeconomic status. In order to measure socioeconomic status, the students were asked to respond to a question about their fathers' occupations. The responses were coded so that scores below 40.68 on the Blishen and McRoberts (1976) scale were coded as 1, and scores at or above 40.68 were coded as 2. The sample was dichotomized into blue-collar and white-collar categories because the distribution was skewed. Approximately 67% of the sample had fathers in blue-collar occupations.

Sample

Students participating in this study were enrolled in the public schools of two communities in the eastern part of the Northwest Territories. The total population of students attending these two schools, 46 Inuit and 11 non-Inuit students, were included in this study. The Inuit students ranged in age from 10.5 to 16.5 years and had attended school for between three and 11 years. More than 50% of them had spent either six or seven years in school. The Inuit students were quite evenly divided between the sexes, with 24 females and 22 males in the sample. The non-Inuit students ranged in age from just under 11 years to just under 16 years. The time that they had spent in school varied between five and 10 years, and over 50% of them had

been at school for between six and seven years. The non-Inuit students included two females and nine males. In sum, the Inuit and non-Inuit students were similar, except for their sex distributions.

The fact that the data for this study are from a small, nonrandom sample of students clearly limits the generalizability of the results. However, small samples have a legitimate place in social research, especially for exploratory studies in areas in which there has been a lack of research (Mueller, Schuessler, & Costner, 1977, p. 370). Moreover, discussions with other researchers and teachers suggest that these two schools are typical of integrated schools throughout northern Canada. On balance, a cautious use of our sample to form some preliminary conclusions seem warranted.

Results

The correlation matrix, means, and standard deviations for the seven variables are presented in Table 1. These correlations were computed on the basis of pair-wise deletion of missing data and were used to estimate the parameters of the model using ordinary least squares regression procedures. In this table, it is evident that ethnicity is moderately correlated with all other variables in the model except for years in school. It is also evident that academic achievement is moderately correlated with socioeconomic status, activism, self-concept of ability, and, not surprisingly, with the number of years a student has been enrolled in school.

In Table 2 the standardized and unstandardized regression coefficients are reported for the effects of the independent variables on the two intervening variables, activism and self-concept of ability, and the dependent variable, academic achievement. In the standardized form each variable has been transformed so that it has a mean of zero and a standard deviation of one, while in the unstandardized form each variable has a mean and a standard deviation which reflect the metric properties of the variable as

Table 1
Correlation Matrix, Means, and Standard Deviations
for the Variables in the Theoretical Model

	1	2	3	4	5	6	7
1. Ethnicity							
2. Sex	-.269						
3. Years of school	-.035	-.015					
4. Socioeconomic status	.523	-.092	.062				
5. Activism	.493	-.238	.039	.399			
6. Self-concept of ability	.269	.044	.090	.323	.029		
7. Academic achievement	.236	.004	.191	.237	.396	.109	
Means	1.19	1.46	7.11	1.33	12.00	15.72	13.09
SDs	0.40	0.50	1.56	0.47	3.46	2.68	6.08

Table 2
Standardized and Unstandardized Regression Coefficients and R^2 s
for the Intervening and Dependent Variables^a

Independent Variables	Intervening Variables		Dependent Variable	
	Activism	Self-concept of Ability	Academic Achievement	Academic Achievement
Ethnicity	.357 (3.108)	.180 (1.213)	.194 (2.968)	.053 (.815)
Sex	-.123 (-.849)	.115 (.614)	.071 (.862)	.111 (1.346)
Years of school	.037 (.082)	.083 (.143)	.191 (.745)	.173 (.674)
Socioeconomic status	.198 (1.451)	.235 (1.331)	.130 (1.666)	.045 (.576)
Activism				.370 (.650)
Self-concept of ability				.049 (.111)
R^2	.286	.137	.113	.209

^aUnstandardized coefficients are in parentheses.

reported in Table 1. For the dependent variable, regression coefficients are reported for both reduced-form (column 3) and fully recursive (column 4) analyses. As such, both the total and indirect causal effects of the independent variables on academic achievement can be calculated (Alwin & Hauser, 1975). Specifically, the total causal effects are the coefficients reported in column 3, the direct effects are the coefficients reported in column 4, and thus the indirect effects, as mediated by activism and self-concept of ability, are computed by subtracting the relevant coefficients in column 4 from the relevant coefficients in column 3.

In Figure 1 the standardized regression coefficients are reported as path coefficients representing the relationships between the independent, intervening, and dependent variables. The coefficients on the curved lines between the independent variables are the correlation coefficients as reported in Table 1, and the coefficients on the lines originating with Xs are the effects of the residuals. This model is congruent with the established conventions of representing path models (Duncan, 1975; Heise, 1975).

Ethnicity has relatively large effects on the two social psychological variables, activism (.357) and self-concept of ability (.180). In both cases, non-Inuit students have higher scores than Inuit students. Nevertheless, the effect of ethnicity is substantially stronger for activism than for self-concept of ability. Socioeconomic status has the second strongest effect on activism (.198), whereas the effect of socioeconomic status is slightly stronger than ethnicity on self-concept of ability (.235). It may seem somewhat surprising

that sex has a negative effect on activism ($-.123$), while it has a positive effect on self-concept of ability ($.115$). These results imply that males are more active than females, while females have higher self-concepts of ability than males.

The coefficients reported in columns 3 and 4 illustrate that ethnicity has a fairly strong total causal effect ($.194$) on academic achievement. When sex, years of school, and socioeconomic status are controlled, non-Inuit students have, on average, an almost one-fifth standard deviation advantage over Inuit students. Nevertheless, the effect of ethnicity is reduced substantially when activism and self-concept of ability are included as intervening variables. Specifically, the effect of ethnicity is reduced from $.194$ to $.053$. This implies that approximately 73% of the effect of ethnicity is mediated by activism (68%) and self-concept of ability (5%).

Within this context, it is noteworthy that years of school and socioeconomic status also have relatively strong effects on academic achievement. The effect of years of school, as expected, is not substantially affected by the intervening variables. That is, students who have been in school for longer periods of time, irrespective of their social psychological dispositions, have higher scores on the academic achievement test than students who have spent less time in school. The effect of socioeconomic status, on the other hand, is substantially affected by the intervening variables. Specifically, the effect is reduced from $.130$ to $.045$ when the social psychological variables are included. This illustrates that approximately 65% of the total effect of socioeconomic status is mediated by activism and self-concept of ability. It is also noteworthy that the effect of sex is increased from $.071$ to $.111$ when the social psychological variables are included. Overall, this illustrates that females have higher academic achievement scores than males, but they would do even better if they had a more active disposition.

Finally, net of other variables, activism has a strong positive effect on academic achievement ($.370$). Specifically, a one-standard deviation change in activism results in a 37% standard deviation change in academic achievement. On the other hand, the effect of self-concept of ability is much smaller ($.049$). The importance of these two social psychological variables, particularly activism, is illustrated by the increase in the amount of variance explained in academic achievement. That is, when activism and self-concept of ability are added to the model, the explained variance is increased from 11.3% to 20.9%.

Discussion

In this study we have reported the effects of ethnicity on activism, self-concept of ability, and academic achievement. Moreover, the relationship between ethnicity and academic achievement has been assessed when activism and self-concept of ability are included as intervening variables and when sex, years in school, and socioeconomic status are included as independent variables. The results illustrate that Inuit students have less positive scores on activism and self-concept of ability than non-Inuit students. Moreover, ethnicity has a fairly strong total causal effect on academic achievement, with non-Inuit students obtaining higher scores

than Inuit students. The findings suggest that the effect of ethnicity on academic achievement is mediated in large part by activism and, to a much lesser degree, by self-concept of ability.

Finding that activism and self-concept of ability are important dispositions which mediate the effect of ethnicity on academic achievement may have practical implications. Specifically, these results suggest that it may be important for teachers of Inuit students to understand the social psychological dispositions of their students. That is, because Inuit students, in comparison with non-Inuit students, generally display lower activism in their classroom attitudes and lower self-concepts of ability, it may be important for teachers to encourage Inuit students to actively participate in the classroom. In this respect, it is suggested that a warm and demanding teacher may affect the Inuit students' self-concept of ability because the students become more active learners and experience greater academic success (Gecas, 1982).

More specifically, these findings provide support for the notion that certain teaching strategies may help improve the academic achievement of Inuit students by providing a better alignment between their existing dispositions and the methods used by their teachers. In this respect, Kleinfeld (1975, 1979) suggests that teachers of Inuit students require two attributes to be effective. First, effective teachers need to create an emotionally warm and personalized classroom environment. Second, effective teachers must demand that their Inuit students produce high quality academic work. In short, effective teachers of Inuit students must be "warm demanders" (Kleinfeld, 1975, p. 329). Such teachers focus on making Inuit students comfortable by personalizing their interaction with them, while at the same time demanding that they actively engage in their work and maintain high academic standards.

The link between activism and the recommendations that teachers become "warm demanders" is supported by recent research which suggests that the effects of family background and ethnicity on academic achievement is mediated, to a considerable degree, by social psychological variables (Cambell, 1983). In essence, this research literature suggests that for minority students a sense of control over their environment makes a significant contribution to their academic achievement. In reference to the items in our activism scale, it is reasonable to suggest that students who score low on this scale are more fatalistic, more present-oriented, and less prone to feel in control over their school experience. Difficulties emerge when students with such dispositions encounter a school system which relies on the value of future-orientation and control. In this respect, Bernstein (1961, p. 296) notes: "The school is an institution where every item in the present is finely linked to a distant future, and in consequence there is no serious clash of expectations between the school and the middle-class child."

However, when this standard model of school organization is provided for Inuit students who appear to be less concerned with control and future orientation, the misalignment occurs between the expectations of those who

manage the organization and their students. The responses of students to this type of strain may take a variety of forms. The typical response for Inuit students, however, appears to be the silent, passive resistance which is a coping strategy in line with the idea of fatalism and lack of control. Following the well-defined conditions for changing student conduct (Bredemeier & Bredemeier, 1978, pp. 167-187), Kleinfeld (1975) suggests that teachers provide genuine affective support that maintains Inuit student self-respect (the warmth component) while insisting that they participate in classroom learning activities (the demanding component).

Teachers may find it difficult to demand participation of Inuit students because they are generally quite passive (Kleinfeld, 1975, 1979). That is, Inuit students seem to have learned to use passive resistance as an effective coping mechanism and, "over the years [they have learned] that white teachers expect native students to stare mutely at the floor when confronted with an academic demand" (Kleinfeld, 1975, p. 327). Consequently, teachers who wish to be warm and demanding will likely need to exert considerable and consistent social pressure to resocialize their Inuit students. Clearly, this will involve a large expenditure of resources. At the same time, the fact that Inuit students are often silent and deferential to the authority of teachers makes it easier for teachers to direct their energies toward students who are doing well or to those who are disruptive. As a result, teachers who wish to develop a warm demanding relationship with Inuit students must be prepared to overcome considerable resistance associated with establishing new norms for both themselves and their students.

Although our findings are preliminary, the suggested implications are supported by more general social psychological research. For example, power and affectivity are two dimensions that appear related to significant changes in social psychological dispositions (Boldt, Lindquist, & Percival, 1976; Brim, 1966; Coser, 1979). This literature suggests that when substantial changes are desired, socializing agents need to have positive sentiments toward those they wish to help, while at the same time holding clear expectations for improved performance. The congruence between these dimensions and the warm and demanding dimensions used to interpret our findings is evident.

Furthermore, our suggestions are congruent with the profiles of the Inuit as reported in the culture and personality literature. This literature illustrates that ethnic groups vary in their susceptibility to the expectations for conforming with group norms (Boldt & Roberts, 1979). The Inuit have been studied in this regard, and the research supports what Briggs (1970) describes as their general "responsiveness to the needs of others" (p. 137). The existence of this disposition lends plausibility to the suggestion that Inuit students may respond to teachers who expect them to take an active orientation toward their school work if these expectations are reasonable and presented in a supportive manner.

Finally, even though we interpret our findings in terms of Kleinfeld's characterization of effective teachers for Inuit students, this is not the only framework that may be used to interpret these findings. The idea that effec-

tive teachers of Inuit student must be warm and demanding can be criticized on the grounds that it is an attempt to change the cultural dispositions of Inuit students. In other words, our suggestions infer that teachers should institutionalize a set of classroom practices that are not congruent with the cultural dispositions of Inuit students. In contrast, it may be argued that teachers should be developing strategies that build on rather than change the cultural dispositions of Inuit students. Such strategies may be more congruent with the idea of multiculturalism, but they would probably invoke radical changes in the existing cultural ideals and organizational arrangements of schools. From this perspective, teachers would need to change so that, for instance, they emphasize *being* rather than *doing*, *past and present* rather than *future*, and *harmony with nature* rather than *subjugation of nature*.

Although these types of changes in schools may be desirable, we do not know of any empirical research that describes and evaluates an effective educational system which has incorporated such changes. In fact, in Kleinfeld's (1975) research, two categories of teachers (sophisticates and sentimentalists) were reported as taking a more passive and understanding rather than active and demanding approach to their Inuit students. However, Kleinfeld's research also suggests that neither the sophisticates nor the sentimentalists were as effective with their Inuit students as those who were warm and demanding.

To argue that alternative teaching strategies have not been developed does not suggest that these strategies could not or should not be developed. Given the research that is available, conclusions about improving the education of Inuit students must be tentative. In this respect, our data and interpretations are suggestive rather than definitive. In essence, we conclude that Inuit education is in need of much more research if we are to develop more effective schools that would enable Inuit students to have more acceptable levels of academic achievement.

References

- Alwin, D.F., & Hauser, R.M. (1975). The decomposition of effects in path analysis. *American Sociological Review*, 40, 37-47.
- Barnes, G.E., & Vulcano, B.A. (1982). School self-acceptance among Canadian Indian, White and Métis children. *Canadian Journal of Behavioral Science*, 14, 60-70.
- Bernstein, B. (1961). Social class and linguistic development: A theory of social learning. In A.H. Halsey, J. Floud, & C.A. Anderson (Eds.), *Education, economy, and society* (pp. 288-314). New York: Free Press.
- Bienvenue, R.M. (1978). Self-evaluations of Native and Euro-Canadian students. *Canadian Ethnic Studies*, 10, 97-105.
- Blishen, B.R., & McRoberts, H.A. (1976). A revised socioeconomic index for occupations in Canada. *Canadian Review of Sociology and Anthropology*, 13, 71-79.
- Boldt, E.D., Lindquist, N.E., & Percival, G.A. (1976). The significance of significant others. *Canadian Review of Sociology and Anthropology*, 13, 345-351.
- Boldt, E.D., & Roberts, L.W. (1979). Structural tightness and social conformity. *Journal of Cross-Cultural Psychology*, 10, 221-230.
- Bredemeier, M.E., & Bredemeier, H.C. (1978). *Social forces in education*. Sherman Oaks, CA: Alfred Publishing.
- Briggs, J. (1970). *Never in anger*. Cambridge, MA: Harvard University Press.

- Brim, O.G. (1966). Socialization through the life cycle. In O.G. Brim & S. Wheeler (Eds.), *Socialization after childhood* (pp. 3-49). New York: Wiley.
- Brookover, W., Beady, C., Flood, P., Schweitzer, J., & Wisenbaker, J. (1979). *School social systems and student achievement: Schools can make a difference*. New York: Praeger.
- Cambell, R.T. (1983). Status attainment research: End of the beginning or beginning of the end? *Sociology of Education*, 56, 47-62.
- Clifton, R.A. (1972). The social adjustment of Native students in a northern hostel. *Canadian Review of Sociology and Anthropology*, 9, 163-166.
- Clifton, R.A. (1975). Self-concept and attitudes: A comparison of Canadian Indian and non-Indian students. *Canadian Review of Sociology and Anthropology*, 12, 577-584.
- Clifton, R.A. (1977). Factors which affect the education of Canadian Indian students. In R.A. Carlton, L.A. Colley, & N.J. MacKinnon (Eds.), *Education, change, and society: A sociology of Canadian education* (pp. 183-203). Toronto: Gage.
- Comber, L.C., & Keeves, J.P. (1973). *Science education in nineteen countries: An empirical study*. Stockholm: Almqvist & Wiksell.
- Coser, R.L. (1979). *Training in ambiguity*. New York: Free Press.
- Duncan, O.D. (1975). *Introduction to structural equation models*. New York: Academic Press.
- Finley, D. (1983). Why Eskimo education isn't working. *Phi Delta Kappan*, 64, 580-581.
- Franklyn, G.J. (1974). Alienation and achievement among Indian-Métis and non-Indians in the Mackenzie District of the Northwest Territories. *Alberta Journal of Educational Research*, 20, 157-169.
- Fuchs, E., & Havighurst, R.J. (1973). *To live on this earth*. Garden City, NY: Doubleday.
- Gecas, V. (1982). The self-concept. *Annual Review of Sociology*, 8, 1-33.
- Hawthorn, H.B. (Ed.). (1967). *A survey of the contemporary Indians of Canada: Economic, political, educational needs and policies, Vol. 2*. Ottawa: Queen's Printer.
- Heise, D.R. (1975). *Causal analysis*. New York: Wiley.
- Honigmann, J.J., & Honigmann, I. (1970). *Arctic townsmen: Ethnic backgrounds and modernization*. Ottawa: Saint Paul University, Canadian Research Centre for Anthropology.
- Inkeles, A., & Smith, D. (1977). *Becoming modern: Individual change in six developing countries*. Cambridge, MA: Harvard University Press.
- Kahl, J.A. (1965). Some measurements of achievement motivation. *American Journal of Sociology*, 70, 669-681.
- Kahl, J.A. (1968). *The measurement of modernism: A study of values in Brazil and Mexico*. Austin, TX: University of Texas Press.
- King, A.R. (1967). *The school at Mopass: A problem of identity*. New York: Holt, Rinehart and Winston.
- Kleinfeld, J.S. (1975). Effective teachers of Eskimo and Indian students. *School Review*, 83, 301-344.
- Kleinfeld, J.S. (1979). *Eskimo school on the Andreefsky: A study of effective bicultural education*. New York: Praeger.
- MacArthur, R.S. (1973). Some ability patterns: Central Eskimos and Nsenga Africans. *International Journal of Psychology*, 8, 239-247.
- MacArthur, R.S. (1978). Ecology, culture, and cognitive development: Canadian Native youth. In L. Driedger (Ed.), *The Canadian ethnic mosaic: A quest for identity* (pp. 187-211). Toronto: McClelland and Stewart.
- Marjoribanks, K. (1972). Ethnic and environmental influences on mental abilities. *American Journal of Sociology*, 78, 323-337.
- Mueller, J.H., Schuessler, K.F., & Costner, H. (1977). *Statistical reasoning in sociology*. Boston: Houghton Mifflin.
- Mueller, H.H., Mulcahy, R.F., Wilgosh, L., Watters, B., & Mancini, G.J. (1986). An analysis of WISC-R item responses with Canadian Inuit children. *Alberta Journal of Educational Research*, 32, 12-36.
- Rampaul, W.E., Singh, M., & Didyk, J. (1984). The relationship between academic achievement, self-concept, creativity, and teacher expectations among Native children in a Northern Manitoba school. *Alberta Journal of Educational Research*, 30, 213-225.
- Roberts, L.W., Clifton, R.A., & Wiseman, J. (in press). Exploring the value orientations of Inuit and White students: An empirical study. *Canadian Journal of Native Education*.

- Taylor, L.J., & Skanes, G.R. (1976). Cognitive abilities of Inuit and White children from similar environments. *Canadian Journal of Behavioral Science*, 8, 1-8.
- Thorndike, R.L. (1973). *Reading comprehension education in fifteen countries: An empirical study*. Stockholm: Almqvist & Wiksell.
- Toohy, K. (1985a). English as a second language for Native Canadians. *Canadian Journal of Education*, 10, 273-293.
- Toohy, K. (1985b). Northern Native Canadian language education. *Canadian Review of Sociology and Anthropology*, 22, 93-101
- Vernon, P.E. (1966). Education and intellectual development among Canadian Indians and Eskimos. *Educational Review*, 18, 79-91, 186-195.
- Vernon, P.E. (1984). Abilities and achievement of ethnic groups in Canada with special reference to Canadian Natives and Orientals. In R.J. Samuda, J.W. Berry, & M. Laferriere (Eds.), *Multiculturalism in Canada: Social and educational perspectives* (pp. 382-395). Toronto: Allyn & Bacon.
- Wax, M.L., Wax, R.H., & Dumont, R.V. (1964). Formal education in an American Indian community. *Social Problems*, 2(4), supplement.
- Wolcott, H.F. (1967). *A Kwakiutl village and school*. New York: Holt, Rinehart and Winston.

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Reading Processes Subgroups in a Clinical Population

The purpose of this study was to identify subgroups within a clinical reading population on the basis of how they processed information as they read. Oral reading miscues and retellings of stories were collected from 123 students in grades 1 to 9 who had been referred for diagnosis of reading problems. Results of factor analysis on miscue, retelling, and reading level variables revealed six processing factors which were consistent with an interactive theory of reading. A subsequent cluster analysis yielded six subgroups which differed in terms of how they processed information sources as they read. While there was some link between reading level and mode of processing, readers differed within, as well as across, reading levels, and these differences have pedagogical implications.

Much research on reading disabilities has focused on a search for pathology, or more specifically, on a single cause for a homogeneous phenomenon. From the disappointing results of this research, it is now widely accepted that children with reading problems form a heterogeneous group (Gittelman, 1985; Lipson & Wixson, 1986; Rutter, 1978; Singer, 1982).

Recent literature contains frequent calls for research on the identification of subgroups. Gittelman (1985) for example, notes that

the identification of more homogeneous subgroups is a rational scientific as well as clinical goal, because better classification of the reading disorders should enable the selection of treatments tailored to each type of dysfunction. (p. 845)

Lipson and Wixson (1986) further state that research into differences and similarities within the reading disability group will help to understand the conflicting results of good-poor reader research and of intervention studies.

Initial attempts to identify subgroups of poor readers focused on underlying perceptual and cognitive variables as the basis for classification. However, Rutter (1978) indicates that caution is required in considering the implications of these classifications. Besides the fact that there is overlap across groups and children who do not fit into any group using these schemes (Rutter, 1978), research also shows that reading achievement is

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not improved by training the perceptual or psycholinguistic abilities involved (Gittelman, 1985; Glass, 1983). From these results, Rutter (1978) and Gittelman (1985) have advocated that differentiation of subgroups be based on measures which assess the reading process. However, few studies have moved in this direction. Lipson and Wixson (1986) report an unpublished study by Carr who used a profile of readers' performance on a battery of component skill measures to identify three distinct subgroups: balanced readers, active comprehenders, and phonological recoders.

From a theoretical perspective, the study reported in this article was based on the interactive theory of reading as postulated by Rumelhart (1977). He viewed reading as involving an interaction of different information sources available to readers, ranging from features of letters (bottom-up) through to syntactic and semantic knowledge (top-down). While good readers engage knowledge-based (top-down) and print-based (bottom-up) processing simultaneously, it has been hypothesized that poor readers may rely heavily on one type of processing and not enough on the other (Stanovich, 1980). The purpose of this study was to identify subgroups within a clinical reading population on the basis of how they processed information as they read.

Procedures

The sample consisted of 123 students who were assessed at the Reading and Language Centre, University of Alberta, between 1976 and 1987. There were 88 males and 35 females. Only subjects who were able to provide both oral reading miscues and unaided recall data on an informal reading inventory were included in the sample. All students were referred for assessment because of perceived reading problems, and at the time of assessment all were attending either regular classes in grades 1 through 9 or special education classes for children aged six through 15. Students were not excluded on the basis of IQ, and the sample included subjects from the mentally handicapped to superior range of intellectual ability. The average reading level of subjects in the sample was grade 3.3.

Passages from three commercial informal reading inventories were used to collect a sample of oral reading miscues and unaided retellings. The *Standard Reading Inventory* (McCracken, 1966) and *Classroom Reading Inventory* (Silvaroli, 1976) were used prior to 1984 to collect data from elementary and junior high age students respectively. Since 1984, the *Bader Reading and Language Inventory* (Bader, 1983) has been used. Both the *Standard Reading Inventory* and the *Bader Reading and Language Inventory* include an unaided retelling component in the test administration. The *Classroom Reading Inventory* was adapted to include this component as well. Each instrument consists of a series of word lists and graded passages at increasing levels of difficulty. Students began by identifying words on word lists, and the results on these lists were used to estimate the level at which to begin having students read passages. For each passage, subjects read the passage orally, recalled everything they were able to remember, and then answered questions to assess comprehension of information not included in the retelling. Passages at progressively more difficult levels were

administered until instructional and frustration levels had been obtained for each subject using criteria provided in the test manuals.

Oral reading miscues and unaided retellings were analyzed from passages at independent and instructional levels. Researchers have found that the nature of miscues and retellings at frustration level is significantly different than at independent and instructional level (Biemiller, 1979; Hood, 1982; Kavanagh, 1981).

Categories to analyze oral reading miscues were selected and adapted from Goodman and Burke's (1972) system. The categories, criteria used for coding, as well as the nature of information source indicated by miscues are noted in Table 1. Overall, miscues were viewed as providing information regarding how students were processing information *while* interacting with the text.

Unaided retellings provide another source of information on how readers process information, but retellings are collected *after* a selection is read, and hence reflect both reading and retrieval processes. Unaided retellings were divided into clausal units, and these were categorized and interpreted according to criteria presented in Table 2 (adapted from Fagan, 1984). In relation to Rumelhart's theory (1977), exact, specific, and embedded recalls reflect bottom-up or text-based processing, experiential recall reflects top-down or knowledge-based processing, and inferential recall involves interaction of both levels of processing.

Coding of the data resulted in five miscue and seven retelling variables. All raw scores were converted to percentages because of differences in the number of responses provided by subjects. These 12 processing variables, as well as the instructional reading level for each subject, were submitted to factor analysis. Six principal components with roots greater than one were rotated to the Varimax criterion. For theoretical reasons, the six-factor solution was selected to serve as the basis for cluster analysis (Veldman, 1967). The increase in error function was greatest between the six- and five-group solutions on the cluster analysis, and on this basis the six-group solution

Table 1
Categories, Criteria, and Interpretation of Miscues

Category	Criteria for Coding	Information Source
High Graphic Similarity	2 of 3 word parts in text word and miscue are the same	print
High Grammatical Acceptability	miscue is grammatical in relation to rest of passage	knowledge of language structure in relation to text
High Semantic Acceptability	miscue is meaningful in relation to rest of passage	knowledge of world in relation to text
Low Meaning Change	miscue results in no significant change to author's meaning	integration of knowledge and text
Correction	miscue is corrected	monitoring on basis of print, knowledge, and/or text

Table 2
Categories, Criteria, and Interpretation of Retellings

Category	Criteria for Coding	Information Source
Exact	verbatim recall of text	text
Specific	paraphrase of text	text from one clause
Embedded	combination of text units	text from more than one clause
Inferential	production of inferences	integrated use of knowledge and text
Experiential	elaborations not constrained by text	knowledge
Text Erroneous	erroneous recall of text	text
Knowledge Erroneous	erroneous use of background knowledge	knowledge

was selected for interpretation. Mean scores for all variables were calculated for each group.

Results and Discussion

Factor Analysis

The results of the six-factor solution are presented in Table 3. There was no clear achievement factor; instead, the achievement variable loaded on what appeared to be more obviously processing factors. Each of the six factors is interpreted below.

All the significant loadings on factor one were miscue variables and all three involved use of both knowledge-based and text-based information in an integrated manner. Hence this factor appeared to involve *integrative processing during reading*. The integrative nature of this factor was most evident in the meaning change variable because a reader must use both text information and background knowledge to produce miscues which are consistent with the meaning intended by the author. While grammatical and semantic acceptability appear to be more reflective of use of knowledge to predict meaningful and grammatical responses, miscues had to be consistent with the overall passage to meet the criteria set for these variables.

The second factor also appeared to be integrative, but this time it involved *integrative processing after reading* as indicated by the positive loading of inferential recall. Responses coded as inferential had to be consistent with the text; the reader basically filled in gaps in the text by integrating information from both knowledge and the text. It is interesting to note that this integrative factor, as opposed to factor one, was linked positively with level of reading, thus indicating that integration of information to make inferences was a function of reading proficiency. The presence of embedded recall on this factor is difficult to interpret because it appears that embedded recall involved a combination of text information only as opposed to the integration of both knowledge and text.

Table 3
Six-Factor Solution for Reading Level and Processing Variables

Variable	Factor Loadings					
	1	2	3	4	5	6
Instructional Reading Level	-0.055	0.536*	-0.497*	0.269	-0.219	0.285
Graphic Similarity	-0.140	0.037	0.779*	0.155	0.033	0.020
Grammatical Acceptability	0.893*	-0.037	0.083	0.066	-0.050	0.014
Semantic Acceptability	0.929*	-0.031	-0.047	-0.095	0.015	0.010
Meaning Change	0.692*	0.188	-0.412	0.059	-0.016	-0.029
Error Correction	0.131	0.098	0.287	0.387	0.659*	0.024
Exact Recall	-0.021	0.010	0.030	0.132	-0.117	-0.930*
Specific Recall	-0.008	-0.253	-0.602*	0.528*	0.095	-0.015
Embedded Recall	-0.024	-0.756*	0.027	0.305	-0.140	0.195
Inferential Recall	0.038	0.833*	0.165	0.069	-0.043	0.109
Experiential Recall	-0.028	0.107	0.378	-0.118	-0.534*	0.426*
Text Erroneous	-0.191	-0.005	-0.039	-0.326	0.749*	0.225
Knowledge Erroneous	0.008	0.027	-0.031	-0.790*	0.016	0.137

*Loadings greater than ± 0.4

The achievement variable showed up again on factor three which appeared to be a *print-based processing* factor. The positive loading of graphic similarity coupled with the negative loading of instructional reading level suggested an inverse relationship between reading proficiency and reliance on graphic cues during reading. In other words, readers at lower levels of proficiency engaged in more print-based processing than those at higher levels. The negative loadings of meaning change and specific recall suggest that when readers focused heavily on graphic cues, it was difficult for them to attend to the author's meaning.

Factor four clearly involved *text-based processing* as indicated by the positive loading on specific recall. The reader must attend to and associate meaning with text in order to store and recall it after a selection has been read. The negative loading of erroneous knowledge-based information is also consistent with this interpretation.

Factor five was less clear-cut but appeared to involve *monitoring* in some way. The positive loading of error correction and erroneous recall appear to be contradictory because one would anticipate that correction of miscues would be related to more accurate rather than less accurate recall. These results may be an artifact of the way the error correction category was defined. Research tends to show that correction of miscues which are *not* meaningful is related to reading proficiency (Beebe, 1980; King, 1978). Because nonmeaningful and meaningful errors were combined in this study, it may be the correction of meaningful errors which is linked to inaccurate

recall of text. The other loading on this factor, a negative loading of experiential recall, revealed that when readers make corrections to achieve accuracy in word identification, they make minimal use of background knowledge to elaborate on what they read.

The sixth and final factor was again clear-cut and was labeled *knowledge-based processing* on the basis of the positive loading of experiential recall. This recall category involved elaboration on the text from background knowledge; information provided was not constrained by the text. The negative loading of exact recall served to strengthen the interpretation of this as a knowledge-based factor because exact recall was the most clearly text-based of all of the recall variables.

Cluster Analysis

The results of the six cluster solution are shown in Table 4 which includes means for each subgroup on each variable as well as means and standard deviations for subgroups combined.

A clinical approach was taken to the interpretation of these subgroups with differences of one standard deviation from the mean for the total group considered to have clinical significance. Differences of this magnitude are noted in Table 4. A clinical rather than statistical approach was taken to describe subgroups because it was felt that differences in patterns rather than on specific variables had the most potential for understanding how these children read. Subgroups are organized in Table 4 from those least able to integrate information (Subgroup 5) to the most integrated readers in this sample of clinic referrals (Subgroup 2). It is clear that increasing integration corresponds in only a general way to increasing reading proficiency.

More mean scores for Subgroup 5 were one standard deviation from total mean scores than were those of any other subgroup, and these deviations were evident on both miscue and recall variables. On miscues, students made less use of language and world knowledge to predict words but made more corrections than any other subgroup. On recall variables, they produced a high percentage of erroneous information and little verbatim recall. Generally, these students appeared to be confused about the nature of reading. They viewed accuracy of word identification as more important than comprehension of the author's meaning. These students were in grades 2, 3, and 7, or in special class. Hence, while most had only been in school for two or three years, one had been in school for much longer and was still confused about what reading is.

While at a lower instructional level in reading, Subgroup 6 obtained mean scores which were at least one standard deviation from the overall mean on three recall variables only. The high score on experiential recall indicated use of knowledge to elaborate on text information, but there was limited evidence of ability to constrain use of background knowledge as reflected in the relatively low score (nearly one standard deviation below the mean) on inferential recall. This subgroup also produced the most embedded recall units of any subgroup, revealing that when text was recalled,

Table 4
Mean Scores for Six Subgroups on Reading Level and Processing Variables

Variables	Means for Subgroups						Grand Means	Standard Deviation
	5 N=5	6 N=6	1 N=17	3 N=18	4 N=39	2 N=38		
Instructional Reading Level	2.56	1.66	3.57	3.71	2.84	3.85	3.31	
Graphic Similarity	35.80	49.17	24.82	8.83*	42.77	26.00	30.17	19.45
Grammatical Acceptability	36.80*	72.50	43.94	75.67	63.54	65.82	62.66	22.72
Semantic Acceptability	27.00*	56.67	25.94*	67.56	51.38	55.87	50.89	23.43
Meaning Change	27.00	22.67	25.06	68.83*	32.08	42.26	38.97	24.60
Error Correction	45.60*	20.83	5.24	19.94	32.51	15.34	21.56	18.53
Exact Recall	4.00*	4.00*	26.47	24.94	19.23	13.63	17.98	13.60
Specific Recall	9.00	16.33	31.00	32.28	19.87	15.40	21.23	12.63
Embedded Recall	4.00	31.17*	16.41	8.89	7.67	5.92	9.51	10.74
Inferential Recall	15.60	12.83	12.53	21.11	29.18	36.95	26.75	14.61
Experiential Recall	1.60	31.50*	3.71	2.44	5.54	9.40	7.13	10.30
Erroneous Text Recall	51.80*	0.00	7.41	7.00	8.80	7.47	9.25	11.66
Erroneous Knowledge	14.00*	4.17	2.18	2.72	2.44	9.68	5.24	8.54

* 1 standard deviation above or below the total mean

it was frequently combined. This may have been partly an artifact of the level these readers reached on the informal reading inventory; the sentences in early levels are generally much shorter than those which typically occur in the oral language of these students. Hence this may reflect use of language knowledge in recalling text. The pattern of responses on the miscue variables was different from that on retellings, with scores on all variables within one standard deviation of the means for the total group. Generally, this subgroup made use of both print-based information and knowledge to identify words when reading orally but was not yet able to integrate this information effectively on a comprehension task. The subjects in this subgroup ranged in grade levels from 1 to 4 with one student in a special class placement.

Although only one mean score for members of Subgroup 1 fell one standard deviation below the total means, mean scores on four other variables were either the highest or lowest for the total group. The score that was one standard deviation below the total mean was on semantic acceptability which assesses the reader's ability to rely on knowledge to predict words which make sense in relation to passage context. Subgroup 1 also obtained a relatively low score on inferential recall which again involves use of knowledge within the constraints of the text. Hence these readers made limited use of their background knowledge to predict words in passage context or to make inferences. They were distributed across all grades from 1 to 9 with many in the grades 2 to 4 range.

In contrast to members of Subgroup 1, those in Subgroup 3 made limited use of graphic cues to identify words. Despite the fact that members of this group processed fewer graphic cues than members of any other group, they were generally able to integrate the graphic cues they did analyze with their background knowledge to predict words which preserved the author's meaning. All scores on recall variables fell within one standard deviation of grand means, again suggesting that members of this subgroup were moving toward integration of information sources as they read for meaning. Students in this group were in grades 3 through 8 with most in the range of grades 4 to 6.

None of the mean scores of Subgroups 4 or 2 was one standard deviation away from the grand mean. However, there were some differences across these two groups on miscues, with Subgroup 4 relying more heavily on graphic cues coupled with a relatively high rate of error correction. Members of Subgroup 2 relied less heavily on graphic cues but were generally able to predict words which were consistent with passage meaning. Recall variables revealed that both subgroups were able to rely on text-based and knowledge-based information when reading for meaning, and both subgroups produced considerable inferential recall. Members of Subgroup 4 were fairly evenly spread across grades 2 to 6, and although they were fairly well-integrated readers, they did need to be somewhat less concerned with graphic cues. Their mean instructional reading level was somewhat below that of members in Subgroup 2 who ranged in grade placement from 1 to 9 with the majority again in grades 2 to 6. Students in group 2 appeared to be

well on their way to becoming effective readers. Some of these children were referred to the clinic to make sure they were making progress. Others were performing poorly in classrooms for reasons other than deficiencies in reading, or their teachers or parents may have overreacted to minor reading difficulties.

Summary and Implications

The factor analysis yielded six processing factors: one print-based, one text-based, one knowledge-based, two integrative, and one monitoring factor. These results fit well with Rumelhart's (1977) characterization of reading as involving an interaction of various sources of information with some factors being bottom-up (text-based), others more top-down (reader-based), and still others clearly involving an integration of information sources. The monitoring variable provides a regulative function and has been postulated by other theorists who work within the interactive framework (Brown, 1980; Yussen, Matthews, & Hiebert, 1982).

There was no clear-cut achievement factor; instead, reading level loaded on two of the processing factors. The negative loading of reading level on the print-based processing factor reflects an inverse relationship between reading proficiency and processing graphic cues. These results do not appear to be consistent with Stanovich's (1986) contention that

It is not that good readers are less reliant on visual information, but that they expend less capacity to process visual information fully.... [Good readers] completely sample the visual array and use less resources to do so. (pp. 368-369)

While none of the subjects in this study could be called good readers, a higher level of reading achievement was associated with less graphic similarity of miscues, so it did appear that better readers were less reliant on visual information. Reading level loaded positively on the factor which involved integration of text-based and knowledge-based information to make inferences. This may partly reflect an instructional bias because poorer readers often receive more focus on literal than on inferential comprehension (Browne, 1971). While no causal links can be drawn from the results of the factor analysis, inclusion of work on drawing inferences would appear to be appropriate in the programs for most problem readers.

Results of the cluster analysis revealed that students in this clinical population varied widely in relative use and integration of information sources as they read. Generally, a higher instructional reading level was associated with a more balanced, integrated use of knowledge and text. However, at both lower and higher levels of reading proficiency, it was possible to identify subgroups on the basis of differences in how they were processing information. Because differences across groups appear to have pedagogical implications, the importance of going beyond a determination of reading level in the diagnosis of reading problems is reinforced by the results of this study. In order to demonstrate the nature of the pedagogical implications of this type of analysis, a few general program recommendations for different groups are presented below, recognizing that these are

far from complete and that further information would be needed in order to plan a program for any individual student.

A comparison of Subgroups 5 and 6 revealed the need for different emphasis in instructional programs despite the fact that members of both subgroups had difficulty integrating information sources. Members of Subgroup 5 demonstrated confusion on both miscues and recalls regarding the nature of reading and need to be immersed in meaningful reading activities. Members of Subgroup 6, while at a lower instructional reading level, were relatively successful in using both graphic cues and their own knowledge to predict words as they read but were far less successful at constraining use of knowledge by text on the recall task. They need to learn how to stay within the constraints of the author, and work on inferencing would help in this regard.

Even more demonstrative of the need for differentiation of instruction was a comparison of Subgroups 1 and 3, both at approximately a mid-third instructional reading level. Both subgroups included students across a wide range of grade placements. However, students in Subgroup 1 did not rely enough on background knowledge to predict words as they read, while students in Subgroup 3 did not make enough use of graphic cues. Both groups need to develop more effective strategies for identifying words, but Subgroup 1 needs to focus on using knowledge and Subgroup 3 on processing graphic cues.

Finally, the students in Subgroups 4 and 2 were already showing a fairly high degree of integration of information sources in their reading. Students in Subgroup 4 need a decreased focus on graphic cues, but generally both need to receive a well-balanced program with increased focus on reading to learn.

There is no intent in this article to imply that the six subgroups identified form a definitive classification of reading problems. Rather, the study reveals the feasibility of defining subtypes in terms of how children with reading problems process information as they read. Further studies using different measures and populations are needed to clarify the range of patterns of processing across problem readers.

References

- Bader, L.A. (1983). *Bader reading and language inventory*. New York: Macmillan.
- Beebe, M.J. (1980). The effect of different types of substitution miscues on reading. *Reading Research Quarterly*, 15, 324-336.
- Biemiller, A. (1979). Changes in the use of graphic and contextual information as functions of passage difficulty and reading achievement level. *Journal of Reading Behavior*, 11, 307-318.
- Brown, A.L. (1980). Metacognitive development and reading. In R.J. Spiro, B.C. Bruce, & W.F. Brewer (Eds.), *Theoretical issues in reading comprehension*. Hillsdale, NJ: Lawrence Erlbaum.
- Browne, M.P. (1971). *An exploratory study of teacher-pupil verbal interaction in primary reading groups*. Unpublished doctoral dissertation, University of Alberta.
- Fagan, W.T. (1984). *Categories for protocol analysis*. Unpublished paper, University of Alberta.
- Gittelman, R. (1985). Controlled trials of remedial approaches to reading disability. *Journal of Child Psychology and Psychiatry*, 26(6), 843-846.

- Glass, G.V. (1983). Effectiveness of special education. *Policy Studies Review*, 2(1), 65-78.
- Goodman, Y.M., & Burke, C.L. (1972). *Reading miscue inventory: Procedures for diagnosis and evaluation*. New York: Macmillan.
- Hood, J. (1982). The relationship of selected text variables to miscue scores of second graders. *Journal of Reading Behavior*, 14, 141-158.
- Kavanagh, M.B. (1981). *Processing differences on three reading levels between no gain and gain groups in a remedial reading program*. Unpublished master's project, University of Alberta.
- King, M.A. (1978). *An investigation of the differences in oral reading behavior between good and poor readers*. Unpublished master's thesis, University of Alberta.
- Lipson, M.Y., & Wixson, K.K. (1986). Reading disability research: An interactionist perspective. *Review of Educational Research*, 56(1), 111-136.
- McCracken, R.A. (1966). *Standard reading inventory*. Klamath Falls, OR: Klamath.
- Rumelhart, D. (1977). *Introduction to human information processing theory*. New York: Wiley.
- Rutter, M. (1978). Prevalence and types of dyslexia. In A.L. Benton & D. Pearl (Eds.), *Dyslexia: An appraisal of current knowledge*. New York: Oxford University Press.
- Silvaroli, N.J. (1976). *Classroom reading inventory*. Dubuque, IA: Brown.
- Singer, M.H. (1982). *Competent reader, disabled reader: Research and application*. Hillsdale, NJ: Lawrence Erlbaum.
- Stanovich, K.E. (1980). Toward an interactive-compensatory model of individual differences in the development of reading fluency. *Reading Research Quarterly*, 16(1), 32-71.
- Stanovich, K. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, 21(4), 360-406.
- Veldman, D.J. (1967). *FORTAN programming for the behavioral sciences*. New York: Holt, Rinehart & Winston.
- Yussen, S.R., Matthews, S.R., & Hiebert, E. (1982). Metacognitive aspects of reading. In W. Otto & S. White (Eds.), *Reading expository material*. New York: Academic Press.

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Exploratory Analysis of Disagreement Among Holistic Essay Scores

This study, using a sample of 300 essays written on a descriptive and an argument topic, examined variation in holistic scores assigned by 20 experienced English teachers. In the first part of the analysis, focusing on the obtained scores, additional ratings were obtained for specific positive features, for errors, and for quality of argument. Results showed inconsistency of holistic judges across both topics and the range of essay quality. Degree of relationship between the holistic scores and the other types of ratings also varied across judges. In the second part of the analysis, holistic score distributions of essays eliciting disagreement were categorized; some characteristics of the writing could be linked to this categorization. Examination of the actual writing showed possible reasons for disagreement, but no one reason applied to more than a few essays. Although the focus was on classroom grading, the study has implications for large-scale assessment, including the areas of stimulus design, the range of acceptable responses, and scorer training.

Since the Britton, Martin, and Rosen (1966) and College Entrance Examination Board studies (Godshalk, Swineford, & Coffman, 1966), there have been many reports concerning the use of holistic (rapid impression) scoring of student writing. Some of these (Evans, 1981; Grobe, 1981) have been fine-grained analyses of possible reasons for the distribution of scores, but the issue of judge disagreement has not been examined in any systematic way. The present study specifically examines disagreement among judges and those essays which have produced this disagreement. First, patterns among judges and their inconsistencies across two topics and across the range of essay quality are examined. Second, the characteristics of the inconsistently scored essays themselves are investigated. These characteristics include error counts, specific positive features, and for one of the two

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topics, framework scores (Robinson & Stemp, 1986), in which the logic of the writer's argument is examined in detail.

Our focus is on grading at the teacher or classroom level. Those who provided the holistic scores used in this analysis—qualified and experienced high school English teachers—were untrained from the perspective of systematic large-scale assessment programs (Mullis, 1984). As is well known, such training procedures can greatly improve agreement, but in this situation can also interfere with the ability to generalize to the teacher working in the isolation of the typical classroom. Because we have uncovered some possible reasons why essay judges might disagree, our results are relevant to training for large-scale assessment. However, our main purpose is investigation of scoring at the school level.

Background

There is considerable literature on methods of scoring writing including that on holistic scoring, error counts, the assessment of positive (analytic) features, and the relationships between these methods. This study explores these systems and their interrelations in a context of holistic judge disagreement. The report makes use of the following terms:

1. holistic scoring—judges are asked to make a single, global quality judgment about each paper, reading rapidly for total impression (Evans, 1981);
2. judge—a holistic scorer. For purposes of clarity and consistency, only those providing holistic scores are referred to as judges, while those who provided other data are called raters, scorers, or (error) counters;
3. primary trait scoring—scoring is focused on the purpose of the piece of writing and success in attaining that purpose; detailed guides for scorers are devised to exemplify the criteria required for each point on a scale (Lloyd-Jones, 1977);
4. framework scoring—a variety of primary trait scoring in which a panel assigns ratings on several scales related to the quality of argument in persuasive writing (Robinson & Stemp, 1986);
5. positive feature scoring—also referred to in the literature as analytic scoring or positive characterization. Prominent single characteristics of writing are identified and each is rated according to quality (Mullis, 1984);
6. error counting—numbers of errors in several categories are counted according to clearly specified guidelines (Evans, 1981);
7. syntactic maturity—complexity of syntax is assessed by criteria such as number of words per T-unit, or number of words per clause (Grobe, 1981).

We need to distinguish between assessment of a particular piece of writing and assessment of writing ability. No claim is made that one or two pieces of writing obtained under stressful conditions will be a fair representation of ability. The present study concerns *pieces* of writing only and reaction to them.

Though holistic scoring had been employed earlier in numerous studies, the uses by Britton, Martin, and Rosen (1966) and Godshalk, Swineford, and Coffman (1966) appear to have been the springboard to its widespread use in many assessment projects (Evans, 1979, 1981; Gorman, White, Orchard, & Tate, 1982; McLean, 1982; Traub, Wolfe, Wolfe, Evans, & Russell, 1976). When particular sets of conditions, such as a large number of judges (Evans, 1981), careful monitoring with all judges on site (New Brunswick, 1977), and inclusion of common marker essays for calibration of judges (Evans, 1979, 1981; McLean, 1982; Traub et al., 1976) are met, reported reliabilities reach into the 0.80 to 0.90 range (Cooper, 1977, p. 19; Follman & Anderson, 1967). Charnay (1984) summarizes the conditions which ought to be present when holistic scoring is conducted. One of her chief concerns is the establishment of mode or topic, as will be discussed below in the context of probable causes of judge splits.

One problem with holistic scoring conducted without reference to explicit criteria is that it reveals no information on specific strengths and weaknesses; consequently, other methods have been pursued. For example, primary trait scoring (Lloyd-Jones, 1977) replaced holistic scoring in the American National Assessment. Variations of the primary trait approach have been applied across a variety of modes by Evans (1985, 1986) in studies in the Northwest Territories. Other large-scale studies of writing, in addition to using holistic scoring, have described results anecdotally with examples (Evans, 1979; McLean, 1982; Traub et al., 1976), or more systematically with reference to error frequencies, independent measures of syntactic maturity, or positive feature scoring.

There have been many pursuits of the question "What made the judges jump?" or "In what direction do judges tend to jump?" Most of the studies have been statistical: correlations, multiple correlations, and factor analyses (Evans, 1981). Studies of this type reach a number of similar findings, the most notable and frequent of which is that analytic scores or positive features correlate highly with holistic scores. The intent of the present study is to go beyond the reporting of relationships among scoring systems in the pursuit of reasons why these relationships exist. To this end, we have employed exploratory data analysis techniques (Tukey, 1977) capable of fine-grained scrutiny of the data.

Gorman et al. (1982, p. 98) report high correlations with holistic scores for scores on organization (0.77) and style (0.72), with grammar and spelling considerably lower. In Evans (1981), correlations with holistic scores tended to be at least as high across most topics and grades for both individual and combined positive feature ratings. McLean (1982) reports a correlation of holistic scores with aggregated positive features of 0.59 (p. 37).

In addition to positive features, length alone seems to have its rewards, as evidenced by correlations with holistic scores of 0.50 for number of words (McLean, 1982) and 0.60 to 0.70 for log (number of words, Evans, 1979). In an analysis of 24 potential predictors of holistic score, Grobe (1981) found that length was the largest unique contributor. Subsequent inclusion of

other variables in the regression equation suggested that *diction* also had a strong relationship to holistic scores. Evans reported that errors, length, and positive *characterization* (*features* in our terminology) accounted for 61% to 82% of the variance in holistic scores across 10 sets of essays. Positive features were the principal contributors in five of these sets, while length and error counts predominated in the remainder.

For errors, an originally exhaustive 19-category counting procedure (Evans, 1979) was later simplified by Evans (1981). These simpler categories, used here and in McLean (1981), are recommended because they capture most of the problems that cause difficulty for students and because they are easy to use. In this simplified system, errors are classified as (1) spelling, (2) major sentence errors including punctuation, and (3) grammatical errors, subcategorized as errors in (a) pronoun, (b) verb, and (c) other.

Several studies have examined the use of a number of positive features—explicit criteria—against which an essay is to be rated on a series of scales. For example, through factor analysis Diederich (1974) derived and elaborated four principal features: ideas, organization, wording (*diction*), and flavor (*style*), in addition to mechanics (usage, punctuation, spelling, handwriting). These criteria, as elaborated by teachers of grades 7 and 8 and edited by Evans, Brown, and Marsh (1977), are set out in the *Intermediate English Guideline* (1977) and the *Ontario Assessment Instrument Pool—Intermediate English* (1980). Adaptations involving criteria for organization, style, and language choice were employed in McLean (1982, p. 37) and adapted for use in the present analysis.

Framework retrieval scoring is an analysis of the logical elements and the relationships between elements in a student's essay (Robinson & Stemp, 1986). The main purpose of framework retrieval analysis is to yield a well-defined portrayal of an essay that can provide a more substantial focus in a follow-up writing conference than can spelling and grammatical errors. It is used in the present investigation to examine whether the logical framework produced is implicitly important in judges' holistic scoring.

Procedures

Essay and Judge Selection

The sample of essays used for the present study was obtained from an earlier study (Nagy & Jarchow, 1981), in which 320 essays on each of two topics were written by grade 10 students. The students were in academic, university-bound programs. About one half came from Newfoundland and the other half from Iowa. There were slightly more girls than boys, and the sample was a bit more rural than the North American average. Thus schools tended to be small, with between one and four classes of academic grade 10 students.

The topics were a description, "Describe trying to get to sleep with a mosquito buzzing" (Topic 1), and an argument, "Argue for or against the statement: 'Children over fourteen should have as much say as parents in reaching decisions which affect the entire family'" (Topic 2). Brand and

House (1987) have investigated differential performance and rating of quality on emotionally loaded and neutral topics and have found relationships between essay rating and emotional level (by self-rating) of the writers. Gee (1987) has found that essay scores in choice situations are related to topic choice.

In the original study, each essay was holistically scored by four experienced grade 10 English teachers. Two variables, a quality score and a measure of interjudge agreement, were produced for each essay after norming within the 40 scores awarded by each judge. These scores were used in the present study to draw samples of 150 essays within each topic:

1. Fifty essays which elicited the most disagreement among the four judges on each topic became the inconsistent essays.
2. From the remaining essays, on which there was relative agreement among the four judges, a random sample of 50 from the 20th to 40th percentile in each topic became the low consistent essays.
3. A random sample of 50 from the 60th to 80th percentile in each topic became the high consistent essays.

Once the selection of the sample from the larger set was completed, no further use of the Nagy and Jarchow (1981) results was made. Each group of 50 essays was divided in half to produce two sets of 75 essays within each topic, 25 from each of the three categories: inconsistent, low consistent, and high consistent. The three types of essays were intermingled for presentation to judges, and several orders of presentation were used. There was no direct control of the actual order of scoring.

The judges in the present study were all qualified, experienced grade 10 English teachers who either volunteered for participation as a result of previous involvement with the investigators or who were nominated by their department heads.

Scoring Procedures¹

Holistic scores. As our focus was on typical classroom practice, judges were not specifically trained in systematic procedures. Each participant was asked to judge rapidly on a scale of 1 (low) to 10 (high) without applying explicit criteria, to ensure that all points on the scale were used, and to check himself or herself if essays started to *pile up* on only one or two points on the scale. Forty judges participated, each grading one set of essays on each topic, for a total of 150 essays. Twenty holistic scores for each essay were produced.

Error counts. Detailed instructions were prepared as to what constituted an error. Errors were grouped as spelling, grammar, and sentence structure. Eight counters, none from among the holistic judges, counted errors in one set of essays each, thus yielding two independent error counts for each essay. The original intention was to average the two counts. However, there was so much disagreement on the error counts that a third counter was added, and the middle of the three counts used.

Positive features. Four positive features—organization, viewpoint, language, and structure—were rated on separate 1-5 scales following detailed instructions. Viewpoint was applied to Topic 1 only, as this rating was considered redundant in view of the framework scoring used for Topic 2. Each essay was rated by two independent scorers on three or four features, depending on topic. The ratings on each feature were averaged, except in cases of extreme disagreement when the opinion of a third referee was used.

Framework retrieval. Framework scoring (Robinson & Stemp, 1986) is appropriate only to argument or position essays, and thus was applied only to Topic 2. Two teachers, working closely with one of the principal investigators, rated the essays on the following six criteria, using scales from 0 to 3: alternatives considered, type of criteria (consequences) considered, evidence for claims, logical flow, structure for decision making, structure for process argument. Ratings were obtained through discussion by searching for a dominant position on each criterion in each essay rather than by looking for consistency in the position taken.

Data Analysis

The overall purpose of the study was to track judge disagreement by identifying the criteria implicitly used in the holistic scoring process. There were two distinct aspects to the data analysis. The first, essentially quantitative and reported immediately below, focused on the judges rather than the essays and dealt entirely with the measures—holistic scores, positive features, error counts, and framework retrieval scores—rather than with the actual writing. As the objects of this analysis were the holistic scores, the perspective taken was that all other data collected were *correct*. Except for the framework scoring, which was applied only to Topic 2, the two topics are reported together, facilitating a comparison across the two.

The analysis proceeds largely using exploratory methods developed by Tukey (1977). The purpose of this method, as the name suggests, is to *explore* relationships within the data set, rather than to *test* statistical hypotheses. Our aim in the research was to examine possible reasons for disagreement, rather than to report sizes of correlations between various measures. Since Tukey's original work, acceptance of his ideas by the orthodox statistical community can be attested to by publication in the Wiley Series on Probability and Mathematical Statistics of Hoaglin, Mosteller, and Tukey (1983).

The analysis began with a simple cross-tabulation of median scores awarded by each judge to the two topics, designed to explore inconsistencies in generosity at a global level. Next, a more detailed analysis was undertaken to explore consistency across the range of essay quality. Each of the four sets of essays was broken into five "quintiles" of 15 according to overall quality (mean of the 20 scores). A two-step median polish (Tukey, 1977) was performed on the scores, resulting in a set of residual deviation scores, independent of the median generosity of each judge and the median quality of each essay.

These values were then summed for each judge within each quintile, producing five values indicative of consistency across the quality range. These values yielded an assessment of judge consistency both relative to other judges and for the same individual across the two topics. We allowed a tolerance of 5% before characterizing a judge as either positively or negatively inconsistent within each quintile.

These complex data were further reduced, yielding a rating of high, moderate, or low consistency for each judge across the quality range and across topics. For ratings across the quality range, the absolute difference between number of positive inconsistent ratings in the top two versus the bottom two quintiles was added to the corresponding value for negative inconsistent ratings. Counts of 0 or 1 were considered highly consistent, 2 and 3 moderate, and 4 or more low. For the rating across topics, a count was made of the number of quintiles for which the ratings (positive, negative, or tolerable) were the same. Counts of 5 were highly consistent, 3 or 4 moderate, and 0, 1, or 2 low. Individual judges' score distributions were used to exemplify the patterns of inconsistency uncovered by this analysis.

Following this analysis, essays were categorized as high, low, or inconsistently scored. These characterizations were based on the scoring for this study only, and are independent of the similar categorization done in the original Nagy and Jarchow (1981) study. All entries in the residual matrices from the median polish were converted to absolute values, and essay (row) totals were summed. The 25 essays with the highest such totals from each set were designated as *inconsistently* scored. The remaining 50 from each set were divided into 25 *high* and 25 *low* scored. Patterns within the positive features, error counts, and framework scores for each of these groups were examined using stem-and-leaf diagrams. Patterns among these three scoring systems were investigated using scatter-plots.

Despite some caution with respect to the use of the correlation statistic with skewed data, correlations were calculated between each judge's holistic scores and each of total error counts and total positive features. These correlations were divided into high, moderate, and low using cutoffs of 0.40 and 0.50 for relationships with the positive features, and 0.30 and 0.40 for those with the errors. The correlations were then cross-tabulated. This type of analysis was also used to investigate whether judges' implicit reliance on error counts, positive features, or framework scores was consistent across the range of essay quality.

Finally, for the examination of the actual writing, a more fine-grained categorization of scoring distributions assigned to each essay was required. Because of its post hoc nature, this categorization is detailed in the results section below. The second analysis, essentially qualitative, focused on the essays rather than the judges and examined in detail a subset of essays scored inconsistently. Although the numerical values are discussed, the actual writing was the target of examination.

Results of Score Analysis

Overall Generosity in Holistic Scores

Table 1 contains the distribution, in cross-tabular form, of the median holistic scores awarded by each of the 40 judges on the two topics. A median quality essay was scored anywhere between 30% and 70% on the 10-point scale depending on the judge and topic. Individual judges were not internally consistent; only 18 of 40 gave the same median score for both topics. For example, the 23 judges who awarded a median score of 5 for topic 2 gave the following median scores for Topic 1: one 3, five 4s, ten 5s, and seven 6s. Even allowing that quality on the two topics might be different, this lack of consistency is striking. Similar results showing a relationship between topic choice and score were obtained by Gee (1987).

Consistency Across Quality Ranges and Topics

In attempting to find reasons for scores varying as they do, it is important to ascertain whether judges are consistently generous across the quality range, or whether, for example, some are unusually generous with poorer essays. The quintile technique described above was used to assist in finding different patterns within the scores awarded by each judge. Table 2 summarizes the judges as they were placed in consistency categories by this analysis. It is evident that our ad hoc criteria for these categorizations were more stringent across topics than across the quality range. However, more than one half the judges were rated low on one or the other criteria, and three were rated low on both.

This technique, by providing substantial data reduction and allowing emergence of patterns in the scores, allowed easier interpretation of raw score distributions for each judge. Examples, mostly from Topic 1, are contained in Table 3. The quintile summation showed Judge 28 as harsh on good quality essays and easy on poorer ones; from Table 3, 60 of his or her 75 scores were between 4 and 7. From the quintile summations, Judge 1 was hard on the better quality essays; from Table 3, Judge 1 gave 50 of 75 scores of 4 or less. Other judges' patterns in Table 3 are those of Judge 33, who packed 60 of 75 scores between 5 and 8, and Judge 34, who was one of

Table 1
Crosstabulation of Median Scores of Judges Across Topics¹

Topic 2 Median	Topic 1 Median			
	3	4	5	6
4		1	5	
5	1	5	10	7
6			3	7
7				1

¹Entries are numbers of judges.

Table 2
Judge Consistency Summary¹

Consistency Across Score Range	Consistency Across Topics		
	High	Moderate	Low
High	3	5	10
Moderate	4	5	7
Low	2	1	3

¹Entries are numbers of judges.

the few judges perfectly consistent across all five quintiles within our 5% tolerance. The last two columns of Table 3 show the distribution for Judge 7, who was one of the judges showing the greatest difference across the two topics. For Topic 1, Judge 7 awarded 14 scores of 8 or more, while for Topic 2, only one.

After discussion of patterns within the positive features, error counts, and framework retrieval scores, we return to the holistic scores and their relationships with other essay characteristics.

Patterns in Positive Features

The essays in each set were classified as high, low, or inconsistently scored as described above.

The pattern² of positive features for the inconsistently scored essays was closer to that of the high scored essays than the low scored ones. The most separation between high and low scored essays was in Organization and Sequence, and Sentence Structure. There was less for Language Choice, and the least for Point of View. This trend was reflected across topics. Also of interest is the fact that there was considerable overlap in the positive features of the high and low scored groups. Typically, only about 20% of each group (low or high) were rated well or poorly enough in each feature to be beyond the range of the other group in that feature (e.g., overlap of the distributions was about 60%). This suggests that by and large the aspects of writing assessed by the independent positive features were not of paramount importance in the overall holistic scores.

Patterns in Error Counts

Correlations among error counts for the three counters were in the 0.40 to 0.70 range for each of spelling, sentences, and grammar, as well as the total count (calculations based on Topic 1, Set 1 only). While such values do not inspire great confidence in the error counts of an individual rater, the choice of the middle of three values for each count ensures that the error counts were reasonably reliable and valid. However, given the apparent difficulty in reaching agreement in error counting, it is legitimate to ask whether the holistic judges, who did not participate in the error counting, were sensitive

Table 3
Frequency Distribution of Scores of Selected Judges

Score	Judge Number					
	28	1	33	34	7	7 ¹
1	1	8		6	2	2
2	2	10		5	4	7
3	6	21	3	14	4	9
4	10	11	7	6	15	15
5	17	7	14	11	12	16
6	16	6	16	9	14	13
7	17	6	18	9	10	11
8	2	2	12	8	6	
9	2	2	1	5	7	1
10	2	2	4	3	1	

¹Refers to Topic 2; all others are Topic 1.

to the error frequencies and types to the same degree as were the independent error counters.

Several characteristics of the error count data are striking. First, the data were positively skewed; most essays had few errors, while a few had many. Second, the low scored and high scored essay error distributions overlapped considerably; low scored essays tended, on balance, to have more errors. Third, spelling errors were the most common type. Virtually all the high scored essays had relatively few spelling errors, but the essays with many spelling errors divided about evenly between low scored and inconsistently scored. This suggests that one of the main sources of disagreement among judges is the importance they place on errors, especially spelling errors. This interpretation is supported by a fourth observation, that essays with remarkably few errors also elicited disagreement. That is, freedom from errors satisfied some judges, but not others. Finally, grammatical errors seemed to have the least relationship with holistic scores. These data, especially those concerning spelling and grammatical areas, receive strong support from Evans' 1981 study.

Patterns in Framework Retrieval Scores

Framework retrieval was rated on six criteria using scales from 0 to 3. Stem-and-leaf diagrams revealed that the traits for which points were awarded were relatively rare; results for most subscales were quite positively skewed. There was at best moderate separation between high and low scored essays on most scales, the major exception being Logical Flow. Where any pattern could be discerned (Consequences, Logical Flow, for example), inconsistently scored essays tended to similarity with the high rather than the low scored essays. As an overall comment, holistic judges did not seem to be actively searching for the attributes which these scales demand in order to award high or even moderate holistic scores. This suggests that

these qualities are in general outside the normal expectations of the holistic judges.

Patterns Across Scoring Systems

Relationships between error counts and positive features, as well as among the error counts as examined through scatter plots, tended to be negligible. There was no evidence that inconsistent holistic scores were related to disparities either between error counts and positive features, or among the different error counts. Relationships of the framework scores with the positive features tended to be moderately positive, and with the error counts close to zero.

Of major interest is the relationship of holistic scores to the other values obtained. We deal with this issue in two analyses: the first, immediately below, deals with differences across judges; the second, in the preamble to the qualitative analysis in the next section, focuses on the essays in a detailed examination of characteristics which elicited disagreement.

Table 4 summarizes the relationships of judges' holistic scores to other criteria for the two topics, based on the correlational analysis and categorization described above. As can be seen, there is considerable variation in what may be the judges' implicit criteria for scoring. One trend evident from Table 4 is that more judges' scores were highly related to positive features for Topic 2 than for Topic 1. Not evident from Table 4, but also of interest, is that only one of 40 judges appeared in the corresponding box for both topics, while 18 appear in boxes that do not "touch." Apparently, judges do not maintain their implicit criteria across topics.

A second type of consistency was sought by examining the relationship of an individual judge's scores to the external criteria across different qualities of essay. Using an analysis similar to that used to produce Table 4, it was

Table 4
Crosstabulation of Strength of Relationship
of Holistic Scores to Error Counts and Positive Features¹

		Strength of Relationship to Positive Features		
		High	Moderate	Low
Strength of Relationship to Error Counts				
Topic 1				
High		6	2	6
Moderate		6	2	3
Low		8	7	0
Topic 2				
High		13	2	0
Moderate		9	4	2
Low		7	0	3

¹Entries are number of judges.

found that judges implicitly gave positive features more weight in better quality essays in about 15% of the cases (essay-judge combinations) and gave positive features more weight in poorer quality essays in another 20%. In about 15% of the cases, judges gave more weight to errors in better quality essays (all in Topic 2), and in another 15% of the cases they gave more weight to errors in poorer quality essays (almost all in Topic 1). About one half the judges showed inconsistency in the implicit criteria adhered to as quality changed, and about one half showed different patterns of behavior on this issue across the two topics.

Correlations of each judge's scores with the total of the framework retrieval scores ranged from 0.08 to 0.72. There were noteworthy patterns. First, of the five judges with correlations over 0.60, three had the lowest relationship with both positive features and error counts. This strongly suggests that these three judges were marking implicitly from within a framework retrieval perspective, a perspective different than that of all others in the sample. Second, of the three judges whose correlations with framework scores were below 0.20, all three had strong relationships with error counts, and two also had strong relationships with positive features. These findings, suggesting identification of criteria implicitly used by holistic judges, are offered as a prelude to the analysis involving the actual writing.

Qualitative Examination of the Essays

Preliminary Comments

To this point in the analysis, the data surrounding the essays have been examined, but the writing itself has not. The next step in the analysis was conducted for each topic on the 50 essays found to produce most scorer disagreement. Before proceeding, we present, with the benefit of hindsight, some comments on the wording of the stimulus topics.

Topic 1 was descriptive: "Describe trying to get to sleep with a mosquito buzzing," a topic which one can assume is within the experience of all students. The phrase "Describe trying to get to sleep," however, led many students who were attempting to write on a universal level—what *one* does or feels—either to produce almost abstract writing or to confound their viewpoint, switching between *you* and the first person narrative. The variety of responses to the stimulus is one likely source of judge disagreement.

Topic 2 was an argument: "Argue for or against 'Children over fourteen should have as much say as their parents in reaching decisions which affect their entire family'," a topic obviously within the experience range of grade 10 students and on which personal experience can be drawn. There were problems as well with this stimulus: Students were directed to argue an extreme position rather than to present a balanced, compromise view. The phrase "as much say as" was extreme and not clear, and the scope of "decisions" was open to interpretation. Students were left to make too many decisions concerning how best to proceed; thus, although the stimulus was common in one sense, it produced a wide range of not particularly comparable responses. Thus, while for Topic 1 it can be assumed that judges are comparing fundamentally the same kind of writing in making judgments,

this assumption cannot be made for Topic 2. Some of the variability in holistic scores can be attributed to this problem.

Essay Classification

For the remainder of the analysis, a more elaborate scheme was required for categorization of essay score distributions, rather than the simple split into high consistent, low consistent, and inconsistent. For each essay the frequency distribution of holistic scores was examined. A check was made of outlier scores to ascertain whether any judge had been scoring erratically enough to require elimination; there seemed to be no case for deleting judges. Each frequency distribution was examined and classified into one of four categories (example score distributions are given in Table 5):

1. Acceptable: acceptable central tendency, with a few stray scores, or distributed in a concentrated rectangle in the upper or lower range, probably indicative of masking of essential agreement through implicit use of a 1-8 or 3-10 scale (1135 and 2143);
2. Rectangular: fairly even distribution across many points with no apparent mode (1050);
3. Modal Rectangular: like Rectangular but with a number of scores concentrated at one point (1046) or two or three adjacent points (2077);
4. Bimodal: two modes some distance apart (1038), one mode and one concentrated rectangle (2055), or tending to trimodal (1131).

The final three categories, Rectangular, Modal Rectangular, and Bimodal were designated as the inconsistently scored essays for further analysis of the actual writing. Of the original 50 categorized as inconsistently scored in the first part of the analysis, there were 42 from Topic 1, the description, and 41 from Topic 2, the argument.

Analysis of Other Scores

Ratings on each positive feature, error counts, and framework retrieval scores (Topic 2 only) were matched against holistic scoring patterns. For the positive features, only 12 of 42 descriptive and two of 41 argument essays had ratings on individual positive features differing from any other by more than 1 on a 5-point scale. Thus the summed rating for the features was used as the measure of positive features. For the error counts, the total count (per 100 words) was employed. In the essays under examination, error frequency was greater than five in only 10 instances (nine descriptive and one argument), and in every case but two the loading was on spelling. For the framework retrieval, the total score was taken as a measure of quality of argument.

A hypothesis to explain lack of judge agreement is that split scores tend to occur in essays rated high on positive features but containing frequent errors. That is, some judges tend to pay more attention to or give more weight to errors than others. For convenience, an error frequency of 4 was taken as a cutoff for *problem* errors, and summed ratings of 12 (of a possible 20) for Topic 1, and 10 (of a possible 15) for Topic 2 as the dividing line between high and low positive features. For the 30 high error essays in our subsets,

Table 5
Sample Score Distributions for Selected Essays

Scale	Distribution Category							
	Acceptable 1135 ¹ 2143		Rectangular 1050	Modal Rectangular 1046 2077		Bimodal 1038 2055 1131		
1		4						4
2		3	1					2
3		4	2	2	1	1	2	2
4		4	2		1	1	2	3
5		5	3	3	2	4	3	4
6	2		3	6	2	6	5	1
7	6		3	3	5	1	1	4
8	4		3	4	4	4	6	
9	4		3	2	2	3	1	
10	4				3			

¹Essay identification numbers

20 descriptive and 10 argument, there were 12 descriptive essays and only one argument essay with high positive feature ratings. This may indicate some tension between positive features and errors in description but not in argument. However, judge splits occurred with considerable frequency even when both error counts were high and positive features low, so this tension was not a major factor in disagreement.

Many studies have shown a fairly strong correlation between word count and score obtained. Overall in our total sample, about a third of the descriptions and a fifth of the arguments exceeded 225 words. In the *disagreement* subsets about half the descriptions and one quarter of the arguments were similarly long. Thus, for exposition at least, no case can be made that length was a special contributor to the unusual score patterns; for description, it may have contributed to a limited extent. Within the descriptions, there were four instances of high length/low positive features, three of them in the Bimodal category. For description, few essays in the set under study were *short*; there were more for argument, but in most cases brevity was associated with a low positive features rating. Hence a brevity versus positive feature rating tension is virtually absent and does not appear to play a significant role in judge disagreement.

The positive features and framework retrieval scores are two different ways of assessing quality. Using cutoff values of 10 in both cases, the two ratings of quality agreed for seven of eight cases in the Rectangular group, five of 11 Modal Rectangular, and only seven of 19 for the Bimodal essays (Topic 2 only). It appears that some judges have been inattentive to the logic of argument, as there was little relationship between features of organization and style and the quality of argument when it was rated independently. This, then, may be a major factor, especially in the bimodal essays where agreement was found in only one third of the cases. It is

reasonable, therefore, to hypothesize that the tension between effectiveness of style and logic is a source of judge disagreement.

The Descriptive Writing—Topic 1

Rectangular essays. The problem of voice (universal or personal) and viewpoint described above was apparent in the 11 rectangular essays. Four writers became directly trapped in switches between *I* and the universal case, and two others came close. Four produced consistently good first-person narratives, and one solved the problem by turning the description into a humorous *scientific* study. The net effect was that judges were required to compare essays actually written in somewhat different modes.

In several instances, the writers started out formally with some finely crafted sentences and later deteriorated into a colloquial style, characterized by frequent *ands* or *buts* and even sentence fragments in an attempt at narrative immediacy. A device frequently used in these essays was hyperbole: Some were quite witty, and some fell flat. Hyperbole is an obvious source of humor, but unevenness in execution combined with differing tastes was probably a contributor to variations in grading.

Modal rectangular essays. The difference between this group of essays and the rectangular group was quite striking. Most of these essays could, with some qualification, be judged relatively easily along one major dimension with one major deficiency over which some judges might be likely to split. The existence of a mode suggests that many judges, in noting defects as well as strengths, *took an average* rather than coming down strongly on one side of the fence or the other.

Of the 12 essays in this group, two appeared to be wholly indifferent pieces: little to praise and little to condemn. A third, a reasonably good narrative, was marred by problems suggestive of English as a second language. Another was a first-person narrative of a mental hospital patient attempting some dialogue with the mosquito—a delightful, light touch, but incoherent and careless in its switches—imagination excellent, execution doubtful. The remaining eight were characteristically dull.

Bimodal essays. Logic would suggest that the bimodal distribution would be produced when more judges were more strongly committed to (or against) a particular feature of the writing and less willing to average strengths and weaknesses than was evident in the modal rectangular distribution. Examination of the group did indicate that something like that tended to happen. Two essays, which were well written, were wholly or almost wholly off topic. Half the judges put one essay in the 5 range; half gave it 1. In the other essay forgiveness at the higher end was greater: two 10s, a 9, and an 8 for style; five judges gave the compromise 5 or 6; and there were seven 1s, three 2s, and a 3.

Three essays were judged weak with judges split between 3 or 4 against 1. Does one award *something* for a piece reasonably on topic and complete despite its errors, or does one sum *undistinguished* and *errors* and come out close to zero?

Another essay produced its major split between 10-9 and 7, but two judges scored it at 2. It was a first-person narrative, telling the story in the past, and had many positive features. Diction, on the whole, was good with some imaginatively hyperbolic expression. However, one also found "blue-assed mosquito," "a damn mosquito," and some version of *damn* repeated six times in the piece. It would seem that while most judges appreciated the essay, the judges who gave it 7 discounted the language choice, and those who gave 2 were possibly so annoyed that they *damned* the whole thing.

Several essays illustrate the problem previously noted—the incomparability of essays quite differently constructed owing in part to a lack of clarity in the stimulus. The range of scores is strong evidence of the difficulty judges had in coping with widely different interpretations and treatments of the stimulus. One essay, with a bimodal distribution of scores grouping around 7-8 and 3, was a refreshingly humorous but quite short exposition on "how to get to sleep." Another, lengthy and with adequate detail, was indifferently told; judges split around 6, 4, and 2. A third was quite long, but there were numerous clinkers in grammar and diction which apparently infuriated some judges as scores gathered around 7, 5, and 1. Finally, one essay produced a range of scores from 9 down to 1 with the concentration at 7-6 and 4. Here the student evidently decided to take seriously and literally the problem of describing how *a person* might get to sleep. The description was carefully planned with a strong concluding sentence. Thus a well-organized essay, complete and relatively error-free, nevertheless produced a wide array of scores, probably because it was unexpected, and, barring the conclusion, intrinsically uninteresting.

The Argument Writing—Topic 2

Problems with the stimulus. Because of the extreme form of the stimulus, with *for* or *against* directing the student to take an immoderate position rather than to present a balanced, compromise view, there were problems for many students. Most students stuck to argument, however, and only one shifted into narrative. Although students might have drawn on personal experiences, few did, and only one of the 41 shifted away from the topic to any extent. On the whole, the essays examined here were abstract and dull.

In an informal observation to one of the authors, Britton (Britton et al., 1966) noted that in his study judges tended to split over essays in which the student expressed an unpopular viewpoint. This suggestion led to the hypothesis tested here. Twenty-three of 41 split-score essays argued fairly unambiguously "Yes, 14-year-olds should have an equal voice in reaching decisions," but two thirds moderated that position to "in most cases." It is therefore impossible to make any general claim that splits tended to occur in response to an *unpopular* stance. However, in several instances where mechanics and quality of argument were both dubious, the student appears to have found redemption in the eyes of some judges by expressing the right sentiments about teenagers and parental wisdom. Thus one may be

tempted to say that judges tended to bunch when appropriate sentiments were expressed.

It is important to note that a large majority of students, whether they argued for or against, qualified their position when in effect the wording of the topic prohibited such a moderate approach. Some students who did stick strictly to the unreasonable extreme prescribed may have hurt their scores (there are too few cases to generalize), and others certainly found themselves out on limbs from which they had to climb down.

Language, mechanics, and organization. The inconsistently scored essays did not seem to suffer in any systematic way from difficulties in language, mechanics, or organization, although there were problems across a substantial number of essays. In each subset there were a number of adequately organized and argued essays which had serious mechanical deficiencies: rectangular, three of eight; modal rectangular, four of 11; bimodal, eight of 22. Several were colloquial or drowned in clichés. Some judges came down heavily against the poor quality of language while others did not. At the other stylistic extreme, a number of the rectangular and modal rectangular essays exhibited an unusual awkwardness, possibly due to efforts to work out of the extreme positions initially chosen.

Length may also have been at issue in a number of the splits and disagreements: The trend was to short, even single paragraph, responses. A few long but otherwise undistinguished essays did receive a number of high as well as mid-range scores, while short essays tended to receive mid- to low-range scores. This trend was not unique to any set but characteristic of all.

Logical frameworks. A separate investigation was made of the Framework Retrieval scores against splits in holistic scoring. Of the 41 essays, 17 obtained a score of 12 or greater on quality of argument. The highest framework score was obtained by an essay for which holistic scores provided a rectangular distribution across 6-9 (also two 10s, a 5, a 4, and a 1!). It was long and was the one essay that shifted somewhat off topic, carrying the argument and illustration back to age six. It did, however, exhibit logic and provided examples. Here, evidently, other factors besides quality of argument caused the score disagreement.

Three essays received the next highest quality of argument score. All three had modal rectangular holistic score distributions, and modes at 7. One of the three was an awkward *the person* pro and con evasion of either position. Another was long, working through an extended illustration, with numerous flaws. The third, though exhibiting vigorous style, ended on a flat note, and the route to any conclusion was difficult to discern. Thus, for each of the three, a mixture of pluses and minuses along with variable quality of argument probably contributed to judge disagreement.

Conclusions

Summary

This investigation proceeded along two paths: a quantitative analysis of holistic, positive features, error, and framework scores, and a qualitative

analysis of the actual writing in the essays which elicited holistic judge disagreement.

The quantitative analysis demonstrated patterns of inconsistency among judges, both across and within 40 individual judges and two essay topics. Because of the large number of possible stimulus types available, generalization from one argument and one description to *writing* should be done with caution. About 25% of the judges scored Topic 2 harder than Topic 1, and another 25% did the opposite. Only three judges were found to be highly consistent across both quality range and topics; other judges avoided high scores, low scores, both high and low scores, and in one case, high scores for one topic and low for the other. The distribution of positive features of the inconsistently scored essays was more like that of the high than the low scored ones. Essays with remarkably few errors tended to elicit judge disagreement on holistic scores, showing that, for some judges, absence of error was quite important, while for others it was not.

In the analysis of the actual writing, disagreement among holistic judges could not be attributed to large differences among the scores assigned for the different positive features. Numerous compositions where judges split could be characterized as *the good try, inconsistent success phenomenon*. Within the inconsistently scored descriptive essays, several subsets could be identified with various features: error counts and positive features at odds, problems of voice, or one dominant feature over which judges might disagree. For the inconsistently scored argument essays, there was a subset which exhibited disharmony between writing style and quality of argument, and another characterized by good logic and mechanical problems. However, the central problem was once again the stimulus itself. Many students got themselves trapped in an effort to support an extreme position and had difficulty in extricating themselves. Efforts to do so often led to an unfortunate style.

Implications

In the qualitative analysis, few clear, general trends emerged. Nevertheless, a number of probable sources of judge tension were uncovered and deserve particular attention in the training of judges in large-scale assessment. Attention to these features may also be of value to the classroom teacher in less formal writing assessment. In position writing there seems to be a premium on writing that expresses *appropriate* sentiments. If there is a not-so-well hidden agenda here concerning the criteria that *really count*, that agenda needs to be brought into the open and fully discussed so that judges will be conscious of the factors to be balanced. In descriptive writing several types of treatment are possible in response to most stimuli. Judge training should include attention to the variety of approaches students employ so that legitimate alternatives are recognized and credited.

The register selected (or shifted to) clearly is an aspect of writing style likely to cause judge disagreement, especially concerning humor, efforts at hyperbole, and stretching the boundaries of *good taste* in diction, imagery, and even usage. It is important to examine these styles in order to make

some consistent accommodation to them. Judges who expect formal writing may be critical of informality of style, even when effectively done.

The stimuli in this study have been stumbling blocks for the students and the judges. Besides care in design, already discussed, pretesting the stimulus is also necessary to minimize an unexpected variety of response modes, a problem noted by Stratta and Dixon (1982). Another much longer study by Ruth and Keech (1982) examined the complex issue of topics or *prompts* generally. They argue that testers "should consider methods of cuing which avoid sounding too much like directions to the writer and more like genuine options. Cues should be arranged if possible to suggest a natural way of planning the response to the topic" (p. 148). Those setting writing tasks must give careful thought as to what really is being asked of the student; it is not acceptable that *best guessers* get the rewards.

In ongoing work related to this project (details are available from the authors), one of the authors is currently pursuing the hypothesis that holistic judges might be especially afflicted by the limits on human information processing, in that they have about a minute to read up to a page of text and react to it. Thus judges may dwell on relatively superficial aspects not because they regard these as most important, but because they cannot do sufficient processing in the time allowed to progress to deeper levels of processing. In preliminary analysis, think-aloud protocols from eight judges were used to identify a rough four-point scale of depth of processing: (a) rudimentary matching of stimulus to a stored image, experienced judges respond automatically to simple mismatches; (b) periodic assessment of how sensible the text being processed *sounds*; (c) relating two components in the stimulus such as noting lack of subject-predicate agreement; (d) mapping stimulus elements to cognitive structure to assess whether they are meaningful or sensible. Such work may yield further insights into appropriate procedures for scoring essays, both for large-scale assessments and classroom grading.

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Notes

1. Because of space limitations, details of the scoring procedures have been omitted. Further information is available from the authors.
2. Because of the amount of data, the stem-and-leaf diagrams used for this analysis of positive features, error counts, and framework scores cannot be included. These tables are available from the authors.

References

- Brand, A.G., & House, G. (1987). Relationships between types of assignments, writer variables, and emotions of college composition students. *Alberta Journal of Educational Research*, 33, 21-32.
- Britton, J.N., Martin, N.C., & Rosen, H. (1966). *Multiple marking of English compositions. Examinations Bulletin #12, The Schools Council*. London: HMSO.
- Charnay, D. (1984). The validity of using holistic scoring to evaluate writing—A critical overview. *Research in the Teaching of English*, 18, 65-81.

- Cooper, C.R. (1977). Holistic evaluation of writing. In C.R. Cooper & L. Odell (Eds.), *Evaluating writing: Describing, measuring, judging* (pp. 3-31). Urbana, IL: National Council of Teachers of English.
- Diederich, P.B. (1974). *Measuring growth in English*. Urbana, IL: National Council of Teachers of English.
- Evans, P. (1979). *Evaluation of writing in Ontario: Grades 8, 12 and 13. Review and Evaluation Bulletin, Vol. 1, #2*. Toronto: Ontario Ministry of Education.
- Evans, P. (1981). *The analysis of writing assessment: The OISE writing evaluation project 1977-1980*. Ottawa: Ontario Institute for Studies in Education.
- Evans, P. (1985). *Northwest Territories middle years achievement testing program 1985—Writing*. Ottawa: Ontario Institute for Studies in Education.
- Evans, P. (1986). *Northwest Territories middle years achievement testing program 1986—Writing and reading*. Ottawa: Ontario Institute for Studies in Education.
- Evans, P., Brown, P., & Marsh, M. (1977). *Criteria for the evaluation of student writing, grades 7 and 8—a handbook*. Toronto: OISE Press.
- Follman, J.C., & Anderson, J.A. (1967). An investigation of the reliability of five procedures for grading English themes. *Research in the Teaching of English, 1*, 190-200.
- Gee, T.W. (1987). Drafting and revising processes in grade 12 students' examination writing. *Alberta Journal of Educational Research, 33*, 96-114.
- Godshalk, F.I., Swineford, F., & Coffman, W.E. (1966). *The measurement of writing ability*. New York: College Entrance Examination Board.
- Gorman, T.P., White, J., Orchard, L., & Tate, A. (1982). *Language performance in schools, secondary survey report #1, assessment of performance unit, for the Department of Education and Science*. London: HMSO.
- Grobe, C. (1981). Syntactic maturity, mechanics, and vocabulary as predictors of quality ratings. *Research in the Teaching of English, 15*, 75-86.
- Hoaglin, D.C., Mosteller, F., & Tukey, J.W. (1983). *Understanding robust and exploratory data analysis*. New York: Wiley.
- Intermediate English guideline*. (1977). Toronto: Ontario Ministry of Education.
- Lloyd-Jones, R. (1977) Primary trait scoring. In C.R. Cooper & L. Odell (Eds.), *Evaluating writing: Describing, measuring, judging*. Urbana, IL: National Council of Teachers of English.
- McLean, L.D. (1982). *Report of the 1981 field trials in English and mathematics, intermediate division*. Toronto: Ontario Ministry of Education.
- Mullis, I. (1984). Scoring direct writing assessments: What are the alternatives? *Educational Measurement Issues and Practice, 3*(1), 16-18.
- Nagy, G.P., & Jarchow, E.M. (1981) *Estimating variance components of essay ratings in a complex design*. Presented at the Annual Meeting of the American Educational Research Association, Los Angeles.
- New Brunswick Department of Education. (1977). *Writing assessment reports*. Fredericton: Author.
- Ontario assessment instrument pool—intermediate English*. (1980). Toronto: Ontario Ministry of Education.
- Robinson, F., & Stemp, H. (1986). A framework approach for improving student writing. *Indirections, 2*(2), 45-54.
- Ruth, L., & Keech, C. (1982). Designing prompts for holistic writing assessments: Knowledge from theory, research and practice. In L. Ruth (Ed.), *Properties of writing tasks: A study of alternative procedures for holistic writing assessment* (pp. 32-213). Berkeley, CA: National Institutes of Education.
- Stratta, L., & Dixon, J. (1982). *Teaching and assessing argument. Discussion Booklet 2*. Southampton, UK: Southern Regional Examinations Boards.
- Traub, R., Wolfe, R., Wolfe, C., Evans, P., & Russell, H.H. (1976). *Secondary-postsecondary interface project II: Nature of students* (2 volumes). Toronto: Ontario Ministry of Education and Ministry of Colleges and Universities.
- Tukey, J.W. (1977). *Exploratory data analysis*. Don Mills, ON: Addison-Wesley.

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Leaders' Priorities and the Congruity Imperative

Contemporary systems theorists and researchers often refer to the congruity imperative: the requirement that organizational activities, procedures, and structures remain congruent with the exigencies of the environment. However, in the research on the behavior of school administrators there is little direct and conclusive information about the extent to which superintendents and principals monitor the external environment and adjust priorities accordingly. This study examined the work priorities of reputedly effective leaders of Canadian school organizations for evidence of the degree to which they were driven by the congruity imperative. The data provided a demographic profile of those effective leaders, a typology of their most important administrative issues, and a typology of the imperatives underlying those issues. Content analysis of the reported imperatives provided support for the idea that the work priorities of effective leaders of school organizations are partly determined by the congruity imperative.

The long-term viability of organizations is linked to the *fit* between the exigencies of the environment and the organizational arrangements (structures) that regulate activities in an organization (Burns & Stalker, 1961; Katz & Kahn, 1966; Lawrence & Lorsch, 1967; Mintzberg, 1973; Thompson, 1967; Tosi & Carroll, 1976; Woodward, 1965). According to contingency theory, one of the essential functions of administrators is to ensure that organizational activities, procedures, and structures remain congruent with the demands of the environment. Tosi and Carroll (1976) have expressed this congruity imperative:

All organizations are in an active relationship with their environments. Just as any organism, such as [the human being], must learn to adapt to its environment or perish, so too must organizations.... [Hence] managers will find it necessary to reassess continually the relationship of the organization's structure and goals to the values of the various publics, internal and external, with which it interfaces. (pp. 155-156)

It seems the most common orientation to the congruity principle is the here-and-now perspective; however, some authors (Aguilar, 1967; Morrison,

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Renfro, & Boucher, 1983) point to the need to take an anticipatory approach. For example, Renfro and Morrison (1983) postulate that

We tend to spend our time on issues we perceive to be most important right now; we fail to scan our surroundings for changes that are in the early stages of development. The flood of problems that forces us into crisis management makes concern for emerging issues appear to be a luxury. It is not. It is a necessity. (p. 50)

In regard to the matter of finding ways to update structures and procedures as circumstances change, Mintzberg (1973) found that senior administrators consider it important to take full charge of the organization's strategy-making system. The main reason for this is that "as [information] centre, the [senior] manager can best ensure that significant decisions reflect current knowledge and organization values" (p. 77). In a similar vein, Peters and Waterman (1982) observed that effective executives "are dependent on lots of people, not just a few in central R & D" (p. 286). The added implication, then, is that managers are likely to be more effective if they also consult people outside their own organizations for solutions to their problems and challenges.

In sum, the literature on effective organizations indicates that executives must (a) systematically monitor the environment for changes that may necessitate adjustments in how the organization functions, (b) ensure that practices in the organization reflect current knowledge and are congruent with relevant conditions in the organization's environment, and (c) involve others in the process of identifying significant environmental pressures. In addition, the literature indicates that the congruity imperative is particularly important when the environment is volatile and that it is of particular significance to senior administrators because of their boundary spanning role. However, studies of the work performed by school superintendents and principals provide few insights on the extent to which they are influenced by the external environment.

For superintendents and principals, the importance of staying abreast of changes in society is accentuated by the fact that education is essentially a social service. Further, superintendents and principals operate at the boundaries of their organizations. These facts suggest that school system and school effectiveness are linked to the degree to which superintendents and principals satisfy the congruity imperative by responding to the exigencies of their organizations' external environments.

However, there is little direct information on the extent to which school superintendents and principals consciously pay attention to the congruity imperative (Morris, 1984) and the information we do have is frequently indirect and ambiguous (Crowson, 1987). We do not know with any certainty whether superintendents and principals systematically track changes in the external environment and deliberately initiate activities that are seen to be necessary to preserve or improve the organization-environment *fit*. Nor do we have strong evidence on the relationship between the attention that administrators pay to the congruity imperative and the effectiveness of their educational units. The information that is available tends to be enigmatic, if not contradictory (Crowson, 1987; Payne, 1987): Some of the research sug-

gests that superintendents and principals tend to have an inward focus, some indicates a sensitivity and responsiveness to forces in the external environment.

Crowson's (1987) review of literature on the superintendent's role revealed many interesting contradictions and anomalies, among them gaps and inconsistencies in data on the superintendent's control over the functioning of his or her system. For example, Hannaway and Sproull (1978-79) observed that coordination and control activities by central office staff have relatively little effect on what happens in schools, least of all on curriculum and instruction. Further, Crowson's review of Mintzberg type studies indicated that much of the large interpersonal dimension of the superintendent's work is devoted to *choreographing* rather than directing others' activities (Cuban, 1985; Feilders, 1978; Larson, Bussom, & Vicars, 1981; Peterson, 1984; Pitner, 1978; Pitner & Ogawa 1981). Yet, as Larson et al. (1981) noted, most superintendents focus on the internal management of their school districts. Contrary to an image which is widely accepted, superintendents spend relatively little time interacting with school trustees and boards; most of their time is devoted to interactions with subordinates.

Similarly, McLeod's (1984) study of directors and superintendents in Ontario revealed a tendency to focus on the internal management of the system. His data reflected "[a] preoccupation with the organization's orderly functioning, as well as the prevention of nasty disruption to the normal course of the educational enterprise" (p. 179). The data also indicated an inclination to avoid the transformational leader role—working at the cutting edge of change and progress in the profession. Instead, McLeod concluded that the CEOs in his sample tended to adopt the *functionary* role—assuring that the most rational means for achieving socially desirable ends are implemented: "The [CEO] is drawn into activities where credibility as pioneer of educational change and progress is likely to be subordinated to mundane strategies designed to keep matters under control" (p. 188). McLeod suggests that this happens because of a tendency to evaluate an administrator's performance "in terms of what does *not* go wrong" (p. 180, emphasis added), with the result that control and technical proficiency take precedence over ventures that require initiative, creativity, and independent action.

Irrespective of the nature of the leadership role or style adopted, senior administrators spend a lot of time interacting with others. Friesen and Duignan (1980) found that approximately 70% of the total working time of the superintendents they studied was spent in verbal contacts with individuals or groups of individuals and that those contacts were distributed as follows: 57% with *internal* persons/groups—students, teachers, school administrators, central office staff; 23% with *boundary* persons/groups—trustees; 9% with *external* persons/groups; and 10% with unclassified others. Moreover, almost 26% of the *contact* time was devoted to obtaining information. It is important to note, however, that Friesen and Duignan's data provide no information on the extent to which the superintendents' con-

tacts, whether with *internals* or *externals*, provided information about developments in the external environment; nor do we know whether any of the time spent on planning strategies for system operation (19%) was prompted by the congruity imperative or by *maintenance* concerns.

Payne's study (1987) was prompted by the contradiction between the conventional wisdom that parents are denied any significant influence on the school and the research findings which suggested that the school principal might in fact be significantly "constrained and channeled by parental influence." Payne sought to determine whether "parents act as a control mechanism over principal behavior and whether parental influence is encouraged by superordinates in order to constrain principal behavior." Payne concluded that

1. Principals were sensitive to the concerns of parents and tried to ensure that parents were satisfied.
2. Principals, in order to maintain a balance among the various influences on them, used parents as "monitors of various environments for the school."
3. Principals' responsiveness to pressures from parents varied: They tended to be more responsive in matters of general policy, less so when specific technical core and personnel matters were at issue.
4. Superordinates expected principals to "contain parent bodies' tendencies to exceed the role envisaged for them."
5. Principals at times increased their capacity to exert influence on superordinates by organizing and encouraging parents.
6. Superordinates used parents to influence principals' behavior.
7. Principals perceived parental influence as a constraint fostered by the district.
8. The *loosely coupled* conceptualization of school systems is misleading: "Schools are highly penetrated. Principals, to maintain the legitimacy of the school, have to cope with diverse ... constituencies ... and particularly they must satisfy the parent community." (pp. 323-326)

Clearly, in the school system that Payne studied, principals were sensitive to the exigencies of the environment.

Two sets of findings by Grainger (1984) provide inferential data on the manner in which principals deal with environmental demands. First, he found a discrepancy between the levels at which parents desired and achieved participation in curriculum, instruction, and personnel decisions. Most parents wanted to upgrade their role from the advisory/support level to the sharing level. However, the majority of educators in Grainger's study felt that such decisions required professional expertise that the parents did not possess and therefore preferred to exclude parents from this domain. Moreover, the parents reported that they were denied the organizational structures that would have permitted them their desired decision making role. These findings suggest that the educators may have protected themselves against direct pressures from the environment by deliberate manipulation of the organizational framework, that is, by using the buffering technique.

Second, Grainger's data indicate that parental attempts to influence affairs in the school system had not been denied absolutely but were merely channeled:

Principals referred to the considerable influence exerted on them as a consequence of the countless informal contacts they had with parents when opinions and concerns were expressed.... There was common agreement [among principals and teachers] ... that school personnel sought to accommodate what they defined as basic community values and beliefs in their administration of the school. (p. 327)

This suggests that principals may act as *sensors* at the boundaries of their organizations but only as part of a *short-range warning system*, one that is tuned in to only the immediate community.

Principals, like superintendents, also seem predisposed toward a *functionary* role. Gunn (1984), after examining the job satisfaction of high school principals, concluded that the image of the principal as a strong instructional leader was not supported by his investigation:

Many respondents saw themselves as being in a "middle management" position rather than in a top leadership position as head of an institution. Their perceived leadership role might be described as an "institutional maintenance" role in which the primary function was to maintain the status quo or to "keep the ship afloat." (p. 233)

As evidenced by the recent studies reviewed here, research on the activities of school superintendents and principals has provided little direct or conclusive information about the extent to which they monitor the external environment and adjust priorities accordingly. Indeed, there are puzzling anomalies: Some of the research provides evidence of active monitoring and responsiveness to the external environment; other research indicates that principals and superintendents focus primarily on smoothing the internal workings of their organizations—on *maintenance* rather than *adaptive* functions (Tosi & Carroll, 1976). Yet other research indicates a *gatekeeping* response to environmental pressures. Furthermore, there are intriguing indications that the locus of the monitoring and adaptive functions may be outside the ranks of educators and that superintendents and principals may tend to take a lower level *functionary* role in adapting their organizations to changed environmental conditions.

To clarify the effect that the congruity imperative has on the behavior of school administrators, it would be helpful to have data on the following questions:

1. What are the issues or problems that principals and superintendents have given the highest priority?
2. Why are those issues given high priority?
3. To what extent are those priorities influenced by environmental pressures?

In this article we report findings from an exploratory investigation of these questions. More specifically, the objectives of this exploratory study were to generate information on:

1. the specific administrative issues that a select group of Canadian superintendents and principals had given the highest priority;
2. the types of issues that were being addressed and the relative frequency with which those types were designated *most important*;

3. the imperatives that caused the issues to be given the highest priority; and
4. the loci of those imperatives—internal to the organization or external.

Method

Chief educational officers, superintendents, and directors of school jurisdictions and senior administrators of selected educational organizations in Canada ($n=768$) were asked to nominate the three most effective educational administrators known to them. The response rate for this nominations phase of the investigation was 24%.

Each of the nominated persons ($n=219$; many were nominated more than once by different nominators) was then sent a questionnaire. Ninety-two completed and returned the questionnaire. Only one respondent elected to remain anonymous by obliterating identifying information on the questionnaire. Follow-up interviews were conducted by telephone with 26 of the respondents; on average these lasted 45 minutes.

In the initial section of the questionnaire, the respondent was asked to record personal demographics—sex, office in the organization, highest academic qualification, and experience (administrative and other) in education.

The remainder of the questionnaire called for unstructured responses. To identify the most pressing issues that confront school executives, respondents were asked to provide a random listing of significant current and anticipated administrative problems/issues and a ranking of those problems/issues in terms of personal priority. Then the respondents were instructed to focus on only the issue that had been ranked most important and to provide the following information: (a) a detailed description of the issue, (b) reasons for giving it the highest priority, (c) a description of the strategies being applied, (d) a description of supportive factors, (e) a description of hindering factors, (f) an estimate of resolvability, (g) an estimate of the time required to resolve the issue, and (h) other pertinent comments or advice.

Content analysis, coupled with multirater validation, was used to reduce the 752 problems/issues that were listed by the principals and superintendents in the sample to 18 categories.

Responses to the question “What are the reasons for giving this issue/challenge a high priority?” were first classified, then cross-tabulated by office/role to ascertain whether principals and superintendents were influenced by different types of imperatives.

Results

The respondents were stratified by position as follows: principals/vice-principals, 25%; superintendents/directors, 54%; others (provincial/federal/academics), 21%. The latter were excluded from the analyses reported here.

Highest formal education levels were Bachelor's, 2%; Bachelor's+, 12%; Master's, 27%; Master's+, 36%; Doctorate, 21%; Other, 2%.

Experience in education ranged from 11 to 40 years, with a mean of 26 years. Experience in educational administration ranged from five to 35 years, with a mean of 18 years.

Types of Issues

The request to “take a few moments to bring to mind the problems/issues that you have already encountered and those which you expect to come up against in the near future” produced a total of 752 entries—many of them duplicates or variants. Content analysis revealed that they could be grouped into 18 classifications:

1. Collective bargaining,

2. Curriculum,

3. Declining enrollments,

4. Evaluation,

5. Financial,

6. French,

7. Governance,

8. Legal,

9. Managerial,
10. Organizational,

11. Planning,

12. Plant and property,

13. Policy,

14. Program,

15. School community relations,

16. Student personnel,

17. Teacher personnel,

18. Technology.

Most Important Issues

The next question addressed was “Which types of issues were most often designated very important?” The hierarchy of types presented in Table 1 emerged.

Clearly, the three classes of issues that were of critical concern to the principals and superintendents in this sample related to the management of teaching personnel, finances, and program. Less frequently identified, but still of the highest priority among these school executives, were problems associated with governance, management, and student personnel. The remaining high priority issues were identified by just a few of the respondents.

On the surface, this ordering suggests that administrators were more frequently concerned about teachers than they were about their students;

Table 1
Hierarchy of Types of Issues

Type of Issue	Percentage Ranking Issue Most Important
1. Teaching personnel	23%
2. Financial	16
3. Program	15
4. Governance	8
5. Managerial	8
6. Student personnel	7

however, as will become evident later, the data provided clear evidence that concern for students' welfare was at the root of practically all issues. As one director of education insisted, "The bottom line is to ensure that students learn; that is why we are all here!"

Principals' and Superintendents' Priorities

When the priorities of principals and superintendents were analyzed separately, some interesting parallels and contrasts emerged. The superintendents' priorities were as follows: (1) teaching personnel, (2) finances, (3) program, and (4) governance. The teacher personnel class of issues was given the highest priority far more frequently than the other three classes. The principals' priorities were as follows: (1) teaching personnel, (2) student personnel, (3) management, and (4) finances. The highest priority was given far more frequently to the first two categories than the other two.

Nature of the Issues

Teaching personnel issues. Ranked *most important* by 23% of the sample, these issues related to supervision and evaluation, reduction of staff, reassignment and recruitment, welfare and morale, tenure, and relationships with unions. Supervision/evaluation and welfare/morale issues were reported most often.

Three themes regarding supervision and evaluation were apparent. The strongest and most consistently articulated theme was a commitment to improving service to clients—students and society. This concern mirrored the conviction that student achievements and other outcome measures are linked in the first place to the quality of teachers' performance. The second theme was a concern about teachers' resistance to supervision and evaluation, particularly in districts which have older staffs. This was frequently linked to a reluctance to change; sometimes it was attributed to an apprehension that "the motives for formal policy on teacher supervision are other than those ... stated." There were frequent references to the need to work with teachers to allay such fears. The third theme was articulated most explicitly by a New Brunswick superintendent who wrote: "Supervision is a massive problem because [every] teacher, supervisor, and administrator is involved. Consequently the issue cannot be solved with any kind of hit and miss action. The solution ... is to have a Master Plan."

Concerns about welfare and morale, although most directly associated with teachers, also reflected an underlying concern for the welfare of students. A principal noted that

the importance of teacher morale cannot be underestimated [because] teachers are of prime importance in the educational enterprise ... [yet] the provincial Ministry has attacked teachers ... as a group of undedicated people who are not doing their jobs ... with the result that teachers feel unappreciated both for their work in the classroom and for their extra-curricular responsibilities.

As for other causes of morale problems, some respondents noted that the role of a teacher today is much more complex than it was in the past and that lack of public understanding of this complexity has led to a frustration and demoralization of the profession. Other respondents attributed the

morale problem to declining enrollments and the attendant erosion of job security. Yet others referred to teacher welfare problems such as stress-related medical problems, resistance to new ideas and change, and the stagnation that occurs when an older and static staff is not exposed to the more recently developed knowledge acquired by younger teachers.

In sum, the challenges for this group of respondents were to develop professional competence, counteract apathy, expose staff to new ideas, increase morale, cope with stress, and promote healthy lifestyles. The overarching goal was to "improve the quality of service to students ... and the community."

Financial issues. Ranked *most important* by 16% of the respondents, the main concern here was the effect of budget cuts on the delivery of services to students.

In the words of one superintendent, "the crux of the issue is how to trim budgets, reduce programs, and lay off staff ... without doing permanent damage." A common aspect of this concern was exemplified in the comment that "without appropriate funding and program flexibility, we will not be able to accommodate a wide range of student needs and interests." A related concern was the possibility that "the erosion of services will create a gradual flight from public school education to private schools."

The fiscal challenges identified by this group of school administrators also translated into the following specific concerns: the struggle to manage reductions in fiscal resources, a task made even more difficult by new courses and programs expected by parents and mandated by provincial legislation; the maintenance and renovation of older buildings; the reduction of administrative staff "without losing the support and leadership of some of these people."

Only one school executive articulated a positive point of view regarding financial constraints. While agreeing that the financial resources of the district were strained and that the elimination of programs was quite possible, he insisted that "this new set of circumstances makes the game more challenging and exciting!"

Program issues. This type of issue was ranked *most important* by 15% of the respondents and reflected three general concerns.

First, a number of school administrators identified specific programs that they wished to introduce, improve, or reorganize. Their goals included such things as expansion of extension programs, introduction of a human ecology program, development of diagnostic testing programs, delivery of special education services, and so on.

Second, numerous respondents were wrestling with the implementation of provincially mandated renewal projects. Those projects related to programs for kindergarten through to secondary students, reviews of secondary school credit systems and compulsory courses, school organization, and the effectiveness of delivery services in general.

Third, some administrators were concentrating their efforts on dealing with pressures to promote excellence. Some noted the difficulties generated by disparate conceptions of excellence; others commented on the demanding

expectations they had encountered, for example, “producing high levels of excellence in attitudes and achievements.” There was also concern about how to deal with the drive to achieve high results on standardized tests, particularly in apposition to developing students’ individual potentials and meeting the rapidly changing demands of society on both economic and technological fronts.

Governance issues. Ranked *most important* by 8% of the respondents, these issues related to political action, particularly in connection with minority needs and public versus private schooling.

For example, some directors in Ontario had been drawn into the political and legal skirmishes that had been precipitated by the introduction of government funding of Roman Catholic schools for Grades 11 and 12, while one principal was engaged in efforts to ensure that such funding would not dilute the *catholicity* of separate schools, “the only justification for a segregated school.” Another director reported the existence of several Christian schools in his jurisdiction and was trying “to work out a compromise that would keep the schools together.”

Other issues in this category included the need to develop satisfactory governance structures for the schooling of Native students, the challenge of developing a strong board, and the introduction of heritage languages in a time of fiscal restraint. One of the British Columbia principals was concerned with changing the attitudes of a provincial government that placed a low emphasis on education.

Managerial issues. Ranked *most important* by 8% of the respondents, these issues related to decision making, mediation, or general management aspects of administration. Specific areas of concern included difficult administrator-trustee relationships; ensuring that programs were being properly implemented; quality of communication between the administrator and his or her students, staff, and parents; and responsibilities so broad that effectiveness was compromised.

Student personnel issues. Issues of this type, ranked *most important* by 7% of the respondents, related directly to student behavior. The responses focused on attendance, discipline, enrichment for capable but underachieving students, ensuring that schools were preparing students for the future, and on trying to save students from “a life of chronic unemployment or short-term units of employment.”

Reasons for Assigning High Priority

In general the imperatives that these principals and superintendents reported had three roots: a service ideology, sociopolitical forces, and personal belief systems.

Service ideology. The largest class of reasons for assigning highest priority reflected a strong commitment to improving and protecting the quality of education provided for students:

It's obvious: our function is to educate children and young men and women and to do it in the best possible manner; [all of] what we do facilitates this priority. (director)

The shortage of financial resources ... could mean cutting programs.... [However] I've always been an advocate of doing the most we can for the most kids.... I want to avoid cutting back on or eliminating programs or services. (principal)

Sociopolitical forces. The next most common set of reasons identified pressures from the external environment such as student demographics; the priorities of political parties; demands expressed by trustees, parents, and business people; the imperatives of the job market and technological developments; and the need to compete with other agencies for limited resources including students. For example, one superintendent observed:

Preparing students for a tenuous future is very difficult. Pressure groups and self-interest oriented individuals are trying to have it go their way. Many people expect the schools to do more and to do it better. At the same time the political pressure in the province appears to be moving in the direction of more funding for private schools and [separate] schools.

Personal beliefs. The third clear class of reasons, albeit small in number, was rooted in strong personal beliefs or values. For example:

I am strongly against the pervasive "regression to the mean" mentality which threatens to engulf our educational system. What's hot is mediocrity; what's not is meritocracy. (principal)

I believe that we need ... [to move] from the confrontational mode to a mutual problem solving mode.... [There is] enormous waste in the confrontational mode: the time, energy, and stress on both sides of the confrontation and ... the positive and productive ideas that never come to the surface from either side. (director)

When the reasons for assigning highest priority were cross-tabulated by office/role to ascertain whether principals and superintendents differed in their orientations to the environment, the expected intra/extra-organizational differential did not emerge.

Discussion

We started by noting that strong support is found in the literature for what we have termed the congruity imperative—the need to maintain *fit* between organizational structures and environmental conditions—and the importance of administrators systematically monitoring the environment for changes and effecting appropriate adjustments in how the organization functions. We also noted that a review of the literature provided little information on the extent to which school administrators pay attention to the congruity imperative. We therefore turn now to a consideration of the ways in which the research reported here has added to information on the congruity imperative in school administration. But before we proceed, a note of caution is in order. Given the select group that participated in this survey and the exploratory nature of this study, the conclusions reached must be considered tentative.

Are Principals and Superintendents Most Concerned About "Maintenance" or "Adaptive" Matters?

As noted earlier, our data indicate that the principals and superintendents in the sample most frequently gave the highest priority to issues associated with teaching personnel, finances, program, governance, management, and

student personnel. More important, the details of their responses consistently indicated that they attached greatest importance to activities that would have the effect of maintaining or improving the quality of education and students' welfare. We conclude that in the data on highest priority issues, the dominant orientation was intra-organizational and of the *maintenance* type (Tosi & Carroll, 1976). Thus our data seem to support the following investigators' conclusions: Larson et al. (1981)—Superintendents tend to focus on internal management; Friesen and Duignan (1980)—A very large proportion of a superintendent's *contact* time is spent with *internal* persons/groups, very little with *externals*; Gunn (1984)—Principals prefer to work at improving conditions for students and teachers, improving the school's effectiveness by developing harmony and high staff morale; McLeod (1984)—Directors and superintendents tend to focus on orderly internal functioning and "the prevention of nasty disruptions"; they tend to adopt a *functionary* role.

To What Extent Are Principals' and Superintendents' Priorities Influenced by Factors in the External Environment?

The literature indicates that effective executives actively scan the environment to identify forces and trends that may be of consequence to their organizations. This study provided little evidence that these reputedly effective administrators scanned the environment with an anticipatory set; their high priority activities seemed to focus more on present demands than on understanding and preparing for the future. Furthermore, the imperatives that underscored the respondents' highest priorities were dominated by the professional ideology (Evan, 1973; Fris, 1975) of providing the best service possible. Like the third cluster or category of imperatives (personal beliefs), this group of reasons cannot be characterized easily as either extra- or intra-organizational, if only because ideologies (especially the professionalism ideology) are often both personalized and shared widely within and without an organization. We seem to have here confirmation of McPherson, Crowson, and Pitner's (1986) caution that "the institutionalized rules, norms, and myths of the larger society are fully reflected in the ... structure of an organization" (p. 177) and that the notion of an organization-environment demarcation has its limits.

The second largest cluster of imperatives for assigning highest priority to an issue—sociopolitical forces—clearly reflected an awareness of and a desire to respond to extra-organizational factors. These data lend support to Payne's (1987) finding that principals are sensitive to parents' concerns and use parents as monitors of the school's various environments. However, our respondents did not evidence the selective responsiveness that was apparent in the studies by Grainger (1984) and Payne (1987). The data reflected a willingness to respond to a variety of pressures from a wide variety of individuals and groups in the external environment.

Finally, as noted before, the expectation that principals would focus primarily on in-house issues while superintendents would focus on issues that originate outside the school system was not supported; superintendents

and principals appeared to be responding to issues in both the internal and external environments of their organizations.

The Congruity Imperative

The data from the exploratory study reported here provide support for the notion that the activities of administrators are indeed influenced by forces in the so-called external environment. However, our data also suggest that the concept of a congruity imperative can be oversimplified.

In its most elementary form, the congruity principle posits that activities, procedures, and structures in an organization must be made to *fit* the exigencies of the environment if that organization is to be successful or even to survive. However, in the literature there are three competing models of the organization/environment relationship (McPherson et al., 1986, pp. 180-200).

Organizational ecology perspective. In this perspective, "it is the environment which is ... the key determinant of organizational form.... It is the terms of the environment that must be honored first and foremost" (pp. 199, 203). In this perspective "the shrewd administrator provides a regular opportunity for ... the inclusion of all points of view in matters that affect children and the school" (p. 205), and internal control and effectiveness are seen to come from responsiveness to the environment.

Public choice or political economy perspective. In this perspective organizations are seen to be shaped by the self-interested actions of individuals; the individuals who constitute an organization maximize their own welfare by pursuing only those rewards (both within and external to the organization) that they idiosyncratically value. An administrator who holds this perspective will concentrate first on understanding the rewards that motivate the organization's members, then on the managerial implications.

Political systems perspective. In this view of organizations there is "a constant dialectic of adaptation between organization and environment—a continuing struggle toward equilibrium [through] a continuous give and take, a mutuality of input and output, of feedback and adjustment" (pp. 186, 201).

Although we do not report our respondents' descriptions of how they were dealing with their most important challenges, we can say that those data support the generalization that "organizations do not engage their environments successfully through a simple absorption of forces from their surroundings.... Interaction is a two-way boulevard.... Both sides (organization and environment) reach out, both sides change, both sides adapt" (McPherson et al., 1986, pp. 182-183). Moreover, those data indicate that all three of the above models must be employed to adequately account for the qualitative variability in organization/environment interactions.

One of the important conclusions is that the three models of organization/environment link may be viewed as descriptive of three archetypical styles or approaches to the management of organizational adaptation. And one might hypothesize that school administrators are more effective if they

are skilled in the approach(es) that is (are) appropriate to the exigencies of the situation.

Future Research

The above speculations lead to two important implications for research on administrative effectiveness. The first is that investigators should continue to look for distinctive patterns of administrative behavior that are associated with organizational adaptation—there is a need to test the robustness of the threefold typology of responses to the congruity imperative. The second research challenge is to determine the conditions (contingent circumstances) under which each of various approaches to the management of the organization/environment synapse is most appropriately invoked.

Note

1. Assistance with the data analysis was provided by four Master's students in the Department of Educational Administration at the University of Alberta: Pat Campbell, Florence Glanfield, Marion Holder, and Karran Thorpe.

References

- Aguilar, F.J. (1967). *Scanning the business environment*. New York: Macmillan.
- Burns, T., & Stalker, G. (1961). *The management of innovation*. London, UK: Tavistock.
- Crowson, R.L. (1987). The local school district superintendency: A puzzling administrative role. *Educational Administration Quarterly*, 23(3), 46-69.
- Cuban, L. (1985). Conflict and leadership in the superintendency. *Phi Delta Kappan*, 67(1), 28-30.
- Evan, W.M. (1973). Some occupational implications for designing an experimental program in educational administration. *Journal of Educational Administration*, 11, 216-243.
- Feilders, J.F. (1978). *Action and reaction: The job of an urban superintendent*. Unpublished doctoral dissertation, Stanford University.
- Friesen, D., & Duignan, P. (1980). How superintendents spend their working time. *Canadian Administrator*, 19(5), 1-5.
- Fris, J. (1975). The professional status of teachers: Some theoretical concerns and an Ontario survey. *Canadian Administrator*, 14(5), 1-5.
- Grainger, R.A. (1984). *The participation of parents in local school decision making*. Unpublished doctoral dissertation, University of Alberta.
- Gunn, J.A. (1984). *Job satisfaction of senior high school principals and their perceptions of school effectiveness, their leadership, and their bases of influence*. Unpublished doctoral dissertation, University of Alberta.
- Hannaway, J., & Sproull, L.S. (1978-79). Who's running the show? Coordination and control in educational organizations. *Administrator's Notebook*, 30(6), 1-4.
- Katz, D., & Kahn, R. (1966). *The social psychology of organizations*. New York: Wiley.
- Larson, L.L., Bussom, R.S., & Vicars, W.M. (1981). *The nature of a school superintendent's work: Final technical report*. Carbondale, IL: Southern Illinois University.
- Lawrence, P.R., & Lorsch, J.W. (1967). *Organization and environment: Managing differentiation and integration*. Harvard, MA: Graduate School of Business Administration, Harvard University.
- McLeod, G.T. (1984). The work of school board chief executive officers. *Canadian Journal of Education*, 9(2), 171-190.
- McPherson, R.B., Crowson, R.L., & Pitner, N.J. (1986). *Managing uncertainty: Administrative theory and practice in education*. Columbus, OH: Merrill.
- Mintzberg, H. (1973). *The nature of managerial work*. New York: Harper & Row.
- Morris, V.C. (1984). *Principals in action: The reality of managing schools*. Columbus, OH: Merrill.
- Morrison, J.L., Renfro, W.L., & Boucher, W.I. (Eds.). (1983). *Applying methods and techniques of futures research*. New Directions for Institutional Research Number 39. San Francisco: Jossey-Bass.

- Payne, C.H. (1987). *Parents and control of elementary school principal work behavior*. Unpublished doctoral dissertation, University of Alberta.
- Peters, T.J., & Waterman, R.H. (1982). *In search of excellence: Lessons from America's best-run companies*. New York: Warner.
- Peterson, K.D. (1984). Mechanisms of administrative control over managers in educational organizations. *Administrative Science Quarterly*, 29(4), 573-597.
- Pitner, N.J. (1978). *Descriptive study of the everyday activities of suburban school superintendents: The management of information*. Unpublished doctoral dissertation, Ohio State University.
- Pitner, N.J., & Ogawa, R.T. (1981). Organizational leadership: The case of the superintendent. *Educational Administration Quarterly*, 17, 45-65.
- Renfro, W.L., & Morrison, J.L. (1983). Anticipating and managing change in educational organizations. *Educational Leadership*, 41(1), 50-54.
- Thompson, J. (1967). *Organizations in action*. New York: McGraw-Hill.
- Tosi, H.L., & Carroll, S.J. (1976). *Management: Contingencies, structure, and process*. Chicago: St. Clair.
- Woodward, J. (1965). *Industrial organization*. London: Oxford University Press.

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Perceived Attributes of Mainstreaming, Principal Change Strategy, and Teacher Attitudes Toward Mainstreaming

The attitudes toward mainstreaming held by elementary teachers who had some experience integrating exceptional students in their regular classes were examined. These attitudes were related to the perceived attributes of mainstreaming. Rogers' revised model of innovations was used to identify the attributes. Attitudes were also related to the behavior of the school principal with respect to mainstreaming using the model of Dalin. The sample consisted of 189 experienced teachers from three large boards of education in an urban area in eastern Ontario. Results show that teachers' attitudes are generally but not universally favorable toward mainstreaming. Attributes of mainstreaming perceived by the teachers support Rogers' model. Dalin's model related to principal behaviors is also supported.

One of the most widely implemented innovations in education during the past decade has been the move to integrate disabled children into the educational services. This means at one end of the process the closing down of segregated educational facilities, and at the other the placement of exceptional children in the regular classroom. These innovations are part of a general movement toward *deinstitutionalization* of the disabled and the *normalization* of their treatment by service providers.

Legislative changes in Canada (O'Reilly, 1984) have made the local public school system the major agent responsible for the provision of educational services for the disabled. The resulting policies and practices have strongly encouraged the practice of mainstreaming, which is generally defined as the placement of an exceptional child in a regular classroom under the direction of the regular teacher for a significant portion of the child's educational program.

The attitudes of teachers toward any innovation determine in part their motivation to attempt the change, or once having made the attempt, to per-

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severe in or discontinue the practice. A variety of recent studies has shown that positive attitudes of teachers contributed to the success of mainstreaming (Brooks & Bransford, 1971; Larrivee, 1981; Roubinek, 1978). Yet not all teachers have positive attitudes. Although some studies have shown that teachers and teachers in training do have positive attitudes toward mainstreaming (Curtis, 1985; Harasymiw & Horne, 1975; Higgs, 1975; Winzer, 1984, 1987), other investigators have reported that teachers have some reservations about it (Barngrover, 1971; Bond & Dietrich, 1982; Bradfield, Brown, Kaplan, Rickert, & Stannard, 1973; Shotel, Iano, & McGettigan, 1972). Moreover, Crealock and Nediger (1983) reported that elementary teachers in Ontario held neutral attitudes toward mainstreaming before they actually experienced it.

This article describes a study which investigates the correlates of attitudes toward mainstreaming of teachers who have already implemented the innovation. For this study, mainstreaming refers to the instruction of exceptional students in regular education classes for at least 25% of the day. Children identified as gifted are not included in the definition of exceptional in this study. In particular, it addresses two questions with respect to elementary level teachers who have had some experience integrating exceptional children in their regular classrooms:

1. What are the perceived attributes of mainstreaming which affect teachers' attitudes toward mainstreaming?
2. Which behaviors of school principals affect teachers' attitudes?

Theoretical Framework

In many school districts in the United States and Canada, mainstreaming is considered innovative (Keeton, 1982; McLaughlin-Williams, 1983; Roubinek, 1978; Spodek, 1982; Stannard, 1976). Teacher concerns about educational innovations are instrumental to the success or failure of implementation. These personal concerns emphasize the notion that in any change of effort "the human element is of prime importance in the acceptance or rejection of an innovation" (Blank & White, 1984, p. 73). Teacher attitudes toward the innovation of mainstreaming is considered crucial (Winzer, 1987), and it appears that other variables such as teacher age, grade level taught, and the nature of the child's disability may be related to attitude formation (Antonak, 1980; Berryman & Berryman, 1981; Larrivee, 1982). Two more variables that may also be related to teacher attitudes are perceptions of the characteristics of mainstreaming and the principal's behavior during the implementation of mainstreaming. The study reported in this article focuses on teacher attitudes toward mainstreaming as related to teacher perception of the characteristics of mainstreaming and to the behavior of the school principal.

Teacher Perception of Mainstreaming

The role of the perceptual process in attitude formation toward innovation is emphasized by Sherif and Cantril (1945). Perception, they report, is al-

ways involved because attitudes are derived from experience rather than being innate.

A recent survey of the research on perception (Johnson, 1987) provides some recommendations and cautions for educational researchers. Although perceptions are dominant and critical determinants of behavior, they are subject to a variety of cultural, personal, organizational, and other factors which attenuate an individual's ability to perceive accurately. However, Johnson also suggests that there is considerable consistency in social perceptions among members of a group. Rogers and Shoemaker (1971) related perceptions to attitude formation and the decision to accept or reject an innovation in their model of the innovation decision process. They identify five perceived characteristics of an innovation which are salient in this process: the relative advantage of the innovation; the compatibility of the innovation with current practices and values; the complexity of the innovation and the difficulty of implementing it; the possibility of attempting a trial run without committing oneself totally to the innovation; and the observability and visibility of the innovation. Their model provided the basis for a study conducted by McLaughlin-Williams (1983). She reports that the best predictors of teacher attitudes are beliefs concerning relative advantage, adaptability, and observability of the innovation of mainstreaming. However, she notes that dimensions describing each of the attributes are not discrete and suggests caution in the interpretation of results as well as a need for further studies in the area of teacher perceptions of mainstreaming.

Recently, Rogers (1983) revised his model of the attributes of an innovation which influence a person's behavior in the innovation decision process. In the updating, the five perceived characteristics of an innovation are more precisely defined by the incorporation of 11 dimensions which provides a clearer description of the characteristics than the Rogers and Shoemaker (1971) version.

In the revised model, relative advantage of an innovation is composed of four dimensions: economy of effort and use of resources; social prestige accruing to the implementor; convenience; and satisfaction. Compatibility of an innovation refers to the degree to which the innovation is perceived as being consistent with the existing value system, with the teacher's previous experience, and with the needs of the teacher and students. Complexity has two dimensions: the innovation viewed as easy or difficult to perform, and easy or difficult to understand. The remaining characteristics are each composed of one dimension. Trialability is the extent to which any innovation may be tried gradually; observability is the extent to which an innovation is visible to others (Rogers, 1983, pp. 213-232).

Administrative Support for Mainstreaming

Administrative support for educational innovations has also been linked to successful implementation (Barnes, 1970; Berman, Greenwood, McLaughlin, & Pinens, 1975; Daft & Bekker, 1978; Dalin, 1978). Indeed, Nichol森 and Tracy (1982) suggest that in the implementation of an edu-

cational innovation, the principal's actions contribute to teacher attitudes toward the innovation. Not surprisingly, administrative support has also been shown to be related to the success of the mainstreaming (Sivage, 1980). Moreover, administrative support has been demonstrated to be related to teacher attitudes toward mainstreaming (Guerin & Szatlocky, 1974; Larrivee & Cook, 1979). Sivage (1980) states that certain school behaviors of the principal are related to the successful implementation of mainstreaming. However, it appears that some exogenous variables may also be included in the principal's role behaviors related to teacher attitudes toward mainstreaming. It seems that the principal plays a liaison role between the school and the parents of exceptional students (Rocha, 1983). In addition, the principal should at least be aware of the extent to which teacher unions support the implementation of mainstreaming (Zey, 1981). At present, there exists a paucity of studies in which a theoretical framework incorporating the multitude of endogenous and exogenous variables related to the principal's role behavior during the implementation of mainstreaming has been utilized.

Dalin's (1978) model of educational change related to the role of the educational administrator in implementing change was used as a framework for collecting teachers' perceptions of the principal's role in implementing mainstreaming in the schools. Using Dalin's model, the administrator's behavior may be divided into four factors: the educational setting, the environment, the innovation, and the change strategy. In a first adaptation of the model for educational research, Duquette (1983) found that each of the four factors is related to the implementation of curricular innovations in Ontario schools. These factors have the added advantage of focusing more attention on the boundary-spanning roles of the principal and the exogenous variables in the change process than do most other models of educational change which tend to focus more on processes internal to the school.

It was therefore the purpose of this study to examine the relationship of teacher perceptions of mainstreaming and the principal's role behaviors with attitudes of regular education teachers toward mainstreaming. Specifically, the 11 dimensions of Rogers' (1983) perceived characteristics of an innovation and Dalin's (1978) four factors related to educational change were assessed on predictions of attitudes toward mainstreaming. The general hypothesis tested in this study was that teacher perceptions of mainstreaming and teacher observation of the principal's behavior are related to teacher attitudes toward mainstreaming. Two specific hypotheses were also tested. It was predicted that each of Rogers' (1983) 11 dimensions of perceived characteristics of innovation as applied to mainstreaming is related to teacher attitudes toward mainstreaming. It was further hypothesized that each of Dalin's (1978) four factors of educational change as applied to the principal's role behaviors during the implementation of mainstreaming is related to teacher attitudes toward mainstreaming.

Research Methodology

Sample

The sample consisted of English-speaking teachers from selected K-6 schools in three large boards of education in eastern Ontario. Using alphabetized lists of schools provided by the three boards of education, every second K-6 school was selected. This procedure resulted in a total sample of 47 schools employing approximately 600 teachers, only a fraction of whom were potential respondents. The eligible sample was limited to only those teachers who had integrated exceptional students (not gifted) for at least 25% of the school day.

Over one half of the teachers in the sample were between 36 and 45 years of age, and 31% were teaching grade four or five. Fifty-six percent of the teachers mainstreamed exceptional students who remained in special education classes for most of the school day, while 34% worked with students who leave the regular classrooms for short periods to receive assistance from a resource teacher. Only 10% of the respondents taught exceptional students for the entire school day in the regular classroom.

The average number of exceptional students mainstreamed into one classroom was 1.3. Teachers in this sample appeared to be integrating a broad range of exceptional children: 23% of the children were mentally handicapped, 35% had behavioral problems, 20% had communication disorders, and 12% had severe physical handicaps. The remaining 10% were children with multiple handicaps.

Although over half the teachers in this sample reported that they had mainstreamed for two or more years, only 40% reported completing any courses in special education.

Instrumentation

The instrument for this study was a four-part teacher questionnaire consisting of 95 items. The first section consisted of 12 items designed to elicit demographic information and to screen respondents.

The second part of the questionnaire consisted of 33 items measuring teacher perceptions of mainstreaming. The instrument was based on a survey used by McLaughlin-Williams (1983) which was revised to reflect Rogers' (1983) updated model. Items in this section were field-tested to establish content and construct validity.

Items in the third part of the survey were adapted from an existing questionnaire (Duquette, 1983) which measured perceptions of the principal's role behaviors when implementing a new curriculum document. Dalin's (1978) factors of educational change were also utilized as the theoretical framework for this survey. As new curricula and mainstreaming were both considered educational innovations and because Dalin's (1978) conceptualization was used in both studies, it seemed that the previous instrument would provide an appropriate basis for this research. The wording in many of the items was changed slightly to reflect mainstreaming rather than curriculum implementation. The 37 items in this section of the questionnaire were also field-tested to establish content and construct validity.

The final section of the teacher questionnaire contained eleven semantic differential-type items, a demographic item, and an item related to teacher attitudes toward mainstreaming. Although there were three measures of teacher attitude, items in the semantic differential served as the dependent variable for this study.

Field-testing of the four-part questionnaire was conducted with graduate students enrolled in a research design course at the University of Ottawa. These graduate students were also elementary school teachers who had mainstreamed exceptional children in their regular education classrooms. No changes were made to the questionnaire after field-testing.

Data Collection

Packets containing instructions, questionnaires, and return envelopes were sent to each of the 47 selected schools. Principals were telephoned to ensure that the packets had arrived at the school and to clarify any instructions. Although most surveys were returned within 14 days, follow-up telephone calls were made four weeks later to the few schools from which teacher questionnaires had not been received.

Data Analysis

Data were analyzed using Pearson product moment correlation coefficients to examine the relationship of each of the 11 dimensions of characteristics of an innovation and the four factors of educational change to teacher attitudes toward mainstreaming. To determine which of the dimensions and factors were the best predictors of teacher attitudes, stepwise regression analyses were done using the 11 dimensions as predictors of attitudes toward mainstreaming in one analysis and the four factors of educational change in the other.

Results

The final sample consisted of 189 teachers who had experienced mainstreaming of exceptional students for at least 25% of the day. Although the total number of teachers who mainstream in the selected schools is unknown, it was assumed that the 189 represented a substantial proportion. However, it is acknowledged that the threat of a biased sample may have existed.

Teacher Perceptions of Mainstreaming

Teacher perceptions of the various attributes of mainstreaming were measured using a 33-item scale which formed the second part of the questionnaire. Responses to items were scored in a Likert-type fashion from 0 to 4.

Internal reliability for each of the 11 dimensions of the scale, as calculated with Cronbach alpha coefficients, ranged from .18 to .69. While some of these coefficients are quite small, the results are not surprising because each dimension was measured by only three items. Pearson product moment correlation coefficients were calculated between each of the dimen-

sions of perception and attitude toward mainstreaming (Table 1). Coefficients range from .25 to .53 and all but two were greater than .35.¹

Each of the 11 dimensions correlated significantly with attitudes toward mainstreaming, which provides support for Rogers' (1983) revised model. A stepwise regression analysis was completed to determine which set of dimensions was the best predictor of attitude. The BMDP2R stepwise regression package was used to conduct this analysis. As shown in Table 2, the set of dimensions which is the best predictor of attitude includes *difficult to do*, *observability*, *needs*, *existing values*, *trialability*, *social prestige*, and *economy*. These dimensions are representative of all five of Rogers' attributes of an innovation.

Teacher Observations of the Principal's Behaviors

The principal's behaviors as perceived by the teachers were measured using a 37-item instrument which formed the third part of the teacher questionnaire. Responses to items were in a no/yes format and were scored 0 and 1 respectively.

Internal reliability was calculated with the Kuder-Richardson (formula 20) test. KR coefficients range from .62 to .84. Pearson product moment correlation coefficients between each of the factors of principal behavior

Table 1
Correlation Between Teacher Attributes of Mainstreaming
and Attitudes Toward Mainstreaming

Teacher Attributes of Mainstreaming	r
Relative Advantage	
Economy	.38
Social prestige	.30
Convenience	.41
Satisfaction	.40
Compatibility	
Existing values	.39
Past experience	.25
Needs	.52
Complexity	
Difficult to understand	.36
Difficult to do	.53
Trialability	
Trialability	.39
Observability	
Observability	.42

N = 189. All rs are significant ($p < .01$).

Table 2
Stepwise Regression Using 11 Dimensions of Teacher Attributes of
Mainstreaming as Predictors of Attitudes Toward Mainstreaming

Dimension	Multiple R	R Squared	Regression Coefficient
Difficult to do	.53	.28	1.08
Observability	.61	.37	1.33
Needs	.66	.43	.72
Existing Values	.68	.46	.99
Trialability	.69	.48	.72
Social Prestige	.70	.49	.77
Economy	.71	.51	.86

F (7, 182) = 26.61, p < .01

and teacher attitudes toward mainstreaming ranged from .28 to .37. All correlations are statistically significant (Table 3), which provides support for Dalin’s (1978) model. Because all factors are statistically related to attitudes, a stepwise regression analysis was performed to determine which set of factors was the best predictor of attitudes. The BMDP2R stepwise regression package was again used. The factor of innovation is the only predictor to emerge from this analysis. This suggests that there is considerable common variance among the four factors.

Perceptions of Mainstreaming and the Principal’s Behavior

Using the BMDP2R stepwise regression package, an analysis was done to determine the set of dimensions and factors that was the best set of predictors of attitudes toward mainstreaming. For this set of data, the best predictors of teacher attitudes are the perceptions *difficult to do*, *observability*, *existing values*, *convenience*, the principal behavior factor of *innovation*, and the perception *satisfaction* (Table 4).

Teacher Attitudes

Items in the semantic differential questionnaire measured teacher attitudes toward mainstreaming. The Cronbach *alpha* for the scale was .90. Respon-

Table 3
Correlations Between Teacher Perceptions of Principal Behaviors
and Attitudes Toward Mainstreaming

Teacher Perceptions of Principal Behaviors	r
Educational setting	.28
Environment	.30
Innovation	.37
Change strategy	.33

N = 189. All rs are significant (p < .01).

Table 4
 Stepwise Regression Using 11 Dimensions of Teacher Attributes of
 Mainstreaming and Four Factors Measuring Principal Behaviors
 as Predictors of Attitudes Toward Mainstreaming

Dimension	Multiple R	R Squared	Regression Coefficient
Difficult to do	.57	.33	.58
Observability	.64	.41	.29
Existing Values	.68	.45	.22
Convenience	.69	.49	.20
Innovation	.72	.52	.17
Satisfaction	.73	.53	.16

$F(6, 166) = 31.69, p < .01$

ses to the items were scored from 0 to 6, and for most items the scores tended to cluster on the positive half of the scale, indicating that the attitudes toward mainstreaming of this group of experienced teachers tend to be positive. Standard deviations for each item tend to be large, which suggests that the instrument did discriminate between various teacher attitudes.

Although the semantic differential was used to test the hypothesis of the study, two other items in the data collection package also provided information about teacher attitudes toward mainstreaming. Responses to a global item measuring teacher attitude toward the experience of mainstreaming were scored on a scale from 0 to 2. The mean 1.34 suggests that the teachers felt positive about their own experiences with mainstreaming. The second item asked teachers if they would freely choose to mainstream the following year. On a two-point scale of no/yes (scored 0 or 1), this sample's mean was 0.76, indicating that more than three quarters of the teachers would voluntarily choose to mainstream children in their classes again the following year. Thus the analysis of these two items, as well as the analysis of the semantic differential, suggests that many teachers feel positive about mainstreaming.

Discussion and Summary

The results of this study demonstrate that a sample of all teachers in the major school boards of the Ottawa area who have mainstreamed exceptional children in their classes generally have positive attitudes toward mainstreaming. These attitudes are correlated with the perceptions that teachers have about the nature of mainstreaming (its costs, benefits, ease of implementation, burdens, etc.). As well, the attitudes are correlated with the teachers' perceptions of the behavior of the school principal in support of mainstreaming both inside and outside the school.

Experienced teachers who have positive attitudes, as measured by the semantic differential, perceive that the day-to-day activities required by mainstreaming such as adapting classroom programs and completing extra

forms are not burdensome. They do not perceive that mainstreaming requires a lot of extra time and work on their part.

Positive teacher attitudes toward mainstreaming are also related to a perception that the regular classroom placement of an exceptional child contributes to positive changes in the pupil's academic performance and/or behavior. These improvements should be visible to the mainstreaming teacher, other teachers, and parents. A third element of perception which is related to positive attitudes toward mainstreaming is its compatibility with current values and professional beliefs held by educators regarding the placement of exceptional children. Essentially, these teachers perceive that the requirements of mainstreaming are easily managed, that integration contributes to improved pupil performance, that the philosophy of mainstreaming is compatible with their own beliefs, and that they generally feel satisfied with the implementation of mainstreaming.

The behavior of school principals also seems to be related to positive attitudes toward mainstreaming. Associated with positive teacher attitudes are the following behaviors of principals. The principal makes clear the rationale and objectives of mainstreaming; clarifies the roles of teachers, consultants, and themselves; and makes known the support of mainstreaming by senior administrative officials. In addition, the principal maintains a flexible organization to meet the requirements of mainstreaming and gives attention to solving problems which individual teachers may have concerning mainstreaming. In summary, teacher observations of the active support and commitment to mainstreaming by the school principal appear to be related to a teacher's attitude toward mainstreaming. Data from this study suggest that exogenous factors, that is, behaviors of the principal which occur or are related to agencies outside the school, are not as strongly related to teacher attitudes as are actions of the principal which concern activities inside the school. Principal behaviors which require face-to-face interactions in the school appear to be more important in this regard than behaviors associated with the principal's role at the board office or in the community.

These sets of results, therefore, provide support for the theoretical framework of this study. For this sample, all 11 dimensions of Rogers' (1983) perceptions of an innovation are positively related to attitude as measured by the semantic differential scale and the *willingness to mainstream* item. The data not only provide support for the revised model of the innovation decision process but also attest to the utility of the measuring instruments. As well, all four factors related to the principal's behaviors produced significant positive correlations with attitudes toward the innovation of mainstreaming. These findings, therefore, provide support for the second element of the theoretical rationale, Dalin's (1978) conceptualization of educational change. However, because there appears to be a lack of discrimination among the four factors, researchers should be cautioned before conducting further research with Dalin's model. Certainly, scales with greater power to discriminate between factors are required. It is also possible that the descriptions of the factors by Dalin need to be refined.

What can be learned from the perceptions of these experienced teachers? While the majority of teachers seemed to have a positive attitude toward mainstreaming, it must be recognized that not all teachers found mainstreaming exceptional children to be a rewarding experience. Almost one quarter of them said that if possible they would avoid mainstreaming in the future. Some teachers did not view the attributes of mainstreaming in a positive light. For some, the rewards were few and the effort great.

Educational leaders who wish that all teachers support mainstreaming can look to the attributes of mainstreaming suggested by this study to be directly related to positive attitudes.

Johnson (1987) provides some direction to educational leaders who wish that all teachers support mainstreaming. Organizational factors such as leader behavior and expectations, systems for rewards, and allocation of resources are important organizational factors which influence teacher perceptions. Administrators can ensure that school policies, regulations, and resources support teachers who have exceptional children in their classroom. They can reduce the perceived difficulty of the task by providing suitable inservice training for teachers (Hummel, Dworet, & Walsh, 1985). Finally, they can engage in those innovation implementation behaviors suggested by Dalin.

In conclusion, mainstreaming is a reality in many school districts in the United States and Canada. It is generally accepted that positive teacher attitudes contribute to the success of mainstreaming of exceptional students in the school. The results of this study indicate that teacher perceptions of mainstreaming and the behavior of school principals are related to teacher attitudes toward mainstreaming. Therefore, consultants involved in the implementation of mainstreaming should attempt to develop positive perceptions of the characteristics and advantages of mainstreaming among regular education teachers. In addition, administrators should recognize their role in providing support to teachers implementing mainstreaming so that positive attitudes toward integration, a key element in the effectiveness of mainstreaming, are developed.

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References

- Antonak, R. (1980). A hierarchy of attitudes toward exceptionality. *Journal of Special Education, 14*, 231-241.
- Barnes, M. (1970). The administrator's role in humanizing the school. *National Elementary Principal, 40*(4), 37-40.
- Barngrover, E.A. (1971). A study of educators' preferences in special education programs. *Exceptional Children, 37*, 754-755.

- Berman, P., Greenwood, P., McLaughlin, M., & Pinens, J. (1975). *Federal programs supporting educational change* (Vol. 5). Santa Monica, CA: Rand.
- Berryman, J., & Berryman, C. (1981). *Use of the Attitudes Toward Mainstreaming Scale with rural Georgia teachers*. Paper presented at the annual meeting of the American Educational Research Association, Los Angeles.
- Blank, S., & White, R.B. (1984). Teachers and technological innovation. *B.C. Journal of Special Education*, 8, 71-80.
- Bond, C.L., & Dietrich, A. (1982). *Regional survey of teacher attitudes toward special education resource programs*. (ERIC Document Reproduction Service, No. ED 228 772).
- Bradfield, H., Brown, J., Kaplan, P., Rickert, E., & Stannard, R. (1973). The special child in the regular classroom. *Exceptional Children*, 39, 384-390.
- Brooks, B., & Bransford, L. (1971). Modification of teachers' attitudes toward exceptional children. *Exceptional Children*, 38, 259-260.
- Crealock, C., & Nediger, W. (1983). *Bill 82 and you*. Toronto: Ontario Public School Teachers' Federation.
- Curtis, C. (1985). Education students' attitudes toward disabled persons and mainstreaming. *Alberta Journal of Educational Research*, 31, 288-305.
- Daft, L., & Bekker, B. (1978). *Innovations in organizations*. New York: Elsevier North-Holland.
- Dalin, P. (1978). *Limits to educational change*. Oslo: Macmillan.
- Duquette, C. (1983). *The principal's role in curriculum implementation questionnaire: The development and validation of an instrument to measure Dalin's Model of Educational Change*. Ottawa: Author.
- Guerin, G., & Sztatlocky, K. (1974). Integration programs for the mildly retarded. *Exceptional Children*, 41, 637-643.
- Harasymiw, S., & Horne, M. (1975). Integration of handicapped children: Its effect on teacher attitudes. *Education*, 96, 153-158.
- Higgs, R. (1975). Attitude formation—contact or information? *Exceptional Children*, 41, 496-497.
- Hummel, J.W., Dworet, D., & Walsh, M. (1985). Exceptional students in regular classrooms: Teacher attitudes and teacher inservice needs. *Canadian Journal for Exceptional Children*, 2, 14-17.
- Johnson, N. (1987). The pervasive, persuasive power of perceptions. *Alberta Journal of Educational Research*, 33, 206-228.
- Keeton, A. (1982). Teacher liability. *Ontario Education*, 14, 12-15.
- Larrivee, B. (1981). Effect of inservice training intensity on teachers' attitudes toward mainstreaming. *Exceptional Children*, 48, 34-39.
- Larrivee, B. (1982). Factors underlying regular classroom teachers' attitude toward mainstreaming. *Psychology in the Schools*, 19, 374-379.
- Larrivee, B., & Cook, L. (1979). Mainstreaming: A study of the variables affecting teaching attitude. *Journal of Special Education*, 13, 315-324.
- McLaughlin-Williams, J. (1983). *Innovation, diffusion, adoption: Regular teachers' perceptions of mainstreaming*. Unpublished doctoral dissertation, University of Michigan.
- Nicholsen, E.W., & Tracy, S.J. (1982). Principal's influence on teacher's attitude and implementation of curricular change. *Education*, 103, 68-73.
- O'Reilly, R.R. (1984). Educational rights for disabled children. *Just Cause*, 2(3), 4-6.
- Rocha, R. (1983). Educating the handicapped—The need for close cooperation between parents, administrators. *NASSP Bulletin*, 67, 92-97.
- Rogers, E.M. (1983). *Diffusion of innovation* (3rd ed.). New York: Free Press.
- Rogers, E.M., & Shoemaker, F. (1971). *Communication of innovations: A cross cultural approach*. New York: Free Press.
- Roubinek, D. (1978). Viewpoint: Will mainstreaming fit? *Educational Leadership*, 35, 410-412.
- Sherif, M., & Cantril, H. (1945). The psychology of "attitudes." *Psychological Review*, 52, 295-304.
- Shotel, J., Iano, R., & McGettigan, J. (1972). Teacher attitudes associated with the integration of handicapped children. *Exceptional Children*, 38, 677-683.
- Sivage, C. (1980). The organizational context of mainstreaming. *Directive Teacher*, 2, 16-17.
- Spodek, B. (1982). What special educators need to know about regular classrooms. *Educational Forum*, 44, 295-307.

- Stannard, R. (1976). Mainstreaming: Some basis for caution. In R. O'Donnell & R. Bradford (Eds.), *Mainstreaming: Controversy and consensus* (pp. 57-79). San Rafael, CA: Academic Therapy Publications.
- Winzer, M. (1984). Mainstreaming the handicapped child: Attitudes of teachers and nonteachers. *Canadian Journal for Exceptional Children*, 1, 23-26.
- Winzer, M. (1987). Mainstreaming exceptional children: Teacher attitudes and the educational climate. *Alberta Journal of Educational Research*, 33, 33-42.
- Zey, K. (1981). Before you mainstream. *Special Education in Canada*, 55, 11-12.

PERSPECTIVES

Policy Research and Politics

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This paper explores what it means to do research that is intended to be relevant for policy. It argues that policy research should not be seen as a technical exercise that is politically neutral. The methodology and the conceptual framework the researcher adopts have political implications which must be consciously confronted. Some examples of research are discussed to illustrate the point. The implications for how research might be used in the political process are also discussed.

Policy research, policy studies, policy centers are all becoming more common in faculties of education in Canada and elsewhere. The faculties of education at the University of British Columbia, the University of Calgary, and the University of Western Ontario now offer policy studies in various ways. The journal *Educational Evaluation and Policy Analysis* was started by the American Educational Research Association a decade ago. The *Journal of Educational Policy* began a year ago at the State University of New York at Buffalo, and *Educational Policy* was started a year earlier in Britain.

There are a variety of reasons for the appeal of the policy label. It provides a common focus for educational scholars in different disciplines to come together around interesting educational debates. It offers the possibility of bringing in research money from government agencies that are analyzing and evaluating policy. The new label is especially appealing to foundations departments because it ties the foundations disciplines more closely to the field by stressing their utility for practitioners, thus giving them an importance they may have seemed to lack in the eyes of curriculum specialists and teacher educators.

The appeal of the educational policy rubric also reflects larger social trends. Cutbacks in university funding force departments to justify their existence more actively and encourage the consolidation of departments which then need new, more encompassing names for what they do. The availability of funding for research is coming to depend increasingly on demonstrated links with current policy issues; the Canadian Social Sciences and Humanities Research Council institutes a matching grants policy and designates areas of *strategic* importance. Moreover, educational policy issues are assuming a somewhat higher profile in the political arena. The links between education and economic growth are emphasized, and the

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needs of the *information society* are debated. In the United States, documents such as *A Nation At Risk*, the *Holmes Report*, and the Carnegie Foundation's studies of high schools and colleges have engendered national discussion about education and educational policies. In Canada, the federal government's forum on postsecondary education, the creation of Ontario's skill development ministry, and the B.C. cabinet's willingness to link education and economic development are a few signs that educational policy is beginning to matter to a wider public.

The trend toward policy studies is, of course, not universally popular with educational researchers. Many have no interest in being hustled into policy research. They would rather study issues that arise out of the disciplines or out of their own interests. Some argue that doing policy research is destined to confirm the second-class status of faculties of education by entrenching the distinction between the *applied* research we do and the *fundamental* or *basic* research done elsewhere in the university. Some see policy studies as a fundamentally conservative enterprise where critical scholars sell out in order to get contracts with policy makers. Policy studies can look boring, conservative, and second-rate.

In this climate, it is important to consider more formally some different conceptions of *policy studies* or *policy research* and to encourage a wider discussion of the issues involved. Policy research encompasses both research on how the policy process in education works and research that is designed to have an impact on social, and more particularly educational, policy. The first is an important field of educational research. It is, however, likely to remain a specialized area of study, appealing to those interested in the politics of education and organizational analysis. It is the second kind of policy research—research designed to inform policy—that can potentially encompass most of the research that we do in education, for educational research is linked to the improvement of policy and practice.

What happens if we start to conceive of our research as having implications for educational policy? The nature of the links between the political process and the research process are at the base of the problem. Doing policy research entails doing research that is linked to the political process in some way and that is meant to affect politics. How would this change what we do? Are the changes ones that should be encouraged or discouraged? What are the pitfalls and what are the benefits?

In this article I argue that to do research that is relevant for educational policy does mean shaping one's research in ways that self-consciously take into account the political process and the researcher's role in it. Instead of setting policy research apart from other educational research, this recognition makes explicit what is implicit in all research. There is increasing awareness that research is not a neutral fact-finding expedition that can be independent of political debate. The ivory tower offers no protection from political controversy, nor should it be used by researchers to claim exemption from political responsibility.

Instead of entrenching educational research as second-class research, this recognition brings educational research into the mainstream. Research

in all disciplines is shaped by its political and social context, and this should be recognized explicitly instead of being hidden away behind a veil of scientific objectivity and political neutrality. Research shaped consciously by political agendas is as diverse, as theoretical, and as important for the development of the disciplines as any other research.

Recognition of the implicitly political nature of research also entails rethinking how research might be used in the political arena. Policy research need not be designed to serve only those who hold political office. In a democracy, all sides of an issue deserve a hearing, and research can help many groups articulate and clarify their concerns.

The article begins with a discussion of the traditional view that science and politics should be kept separate from each other. Examples of educational research are used to illustrate the inadequacy of this position. Finally, some lessons are drawn for researchers about more adequate ways to conceptualize the relation between the political process and the research process.

The Separation of Research and Politics

There is a long intellectual tradition that makes a clear distinction between science and politics and argues that intellectuals have a position outside the political arena to pursue, in an *ivory tower* as we have come to call it, truth at all costs. Politics, in this view, interferes with research objectivity and should be avoided. It is this tradition that makes policy research seem suspect and second-rate.

Weber's classic essay on science as a vocation outlines one version of this argument:

It is said, and I agree, that politics is out of place in the lecture room.... When the docent is concerned with politics, it belongs there least of all. To take a practical political stand is one thing, and to analyze political structures and party positions is another. The true teacher will beware of imposing from the platform any political position upon the student whether it is expressed or suggested. (Gerth & Mills, 1958, p. 146)

Weber was not for a moment against *scientists* being involved in politics as citizens. What he painstakingly argued was that in the process of doing science, political presuppositions must be avoided. Polin gives a more recent version of this argument in Newsome and Buchbinder's (1988) book on university politics:

Any university worthy of its name has to resist cultural, ideological and political pressures that would bend it to requirements irrelevant to the life of the mind and loyalty to the truth. A host of pressure groups seek to subvert academic ideals and corrupt the university and their methods include propaganda, dogma, indoctrination, and cultural, even physical terrorism. (p. 57)

Politics corrupts the academic's search for truth. It biases conclusions and bends honest inquiry; politics should be kept out of university inquiry and out of research.

The promise of objective knowledge revealed through university research also implies, however, that this research should be well-funded by the politicians. The society needs the knowledge of the academic community.

Politicians should avail themselves of the knowledge of academics in order to solve social problems, for the unbiased research-based knowledge of the university is superior to the political bias and half-truths of the political process. This sums up an argument that has a powerful hold over our conceptions of politics and research.

The tradition of the disinterested researcher who can provide rational solutions to social problems can be traced back to the Enlightenment. Torgeson (1986) describes it as the *first face* of policy analysis. It came to dominate the attitude of policy makers and social scientists in the 1960s and '70s. At a time when the *end of ideology* was heralded for the postindustrial era and more sophisticated and powerful methodologies were developed in the social sciences, the promise of social science knowledge for social engineering was at its height (Callahan & Jennings, 1983).

Its philosophy of science was positivist. Science is contrasted with ideology, and political bias. Science is a matter of facts, not values. Since Kuhn's (1970) discussion of paradigms in science and the barrage of critical work on positivist conceptions of science that followed (Carr & Kemmis, 1986), it has become increasingly hard to sustain this view.

Politically, it encompassed "a dream of putting an end to the strife and confusion of human society in favor of an orderly administration of things based on objective knowledge" (Torgeson, 1986, p. 34). This tradition tends to be profoundly antidemocratic in wanting to substitute the knowledge of experts for the knowledge of ordinary people, even though the researcher can be portrayed as the handmaiden of the politician, the disinterested technical problem solver who is called on by the political process only when answers to technical questions are required.

Policy research is, as I understand it, research which should be undertaken by qualified researchers in order to produce evidence on issues deemed to be important by policy makers. Such evidence can then be used in the formulation or revision of laws, or decrees, or educational guidelines. There is an implicit belief or hope that decision oriented research can come up with results that can be used for resolving current problems or issues in education. (Postlethwaite, 1986, p. 135)

Policy research in this tradition is characterized by instrumental rationality. Researchers are asked to look at questions like the following: Was Head Start effective? How should we teach reading? Should vocational training take place in the high schools or the colleges? The researcher does a new study, or consolidates evidence from others to provide the best answer available, based on the most systematic inquiry. The researcher is invaluable for policy makers by making the best information available.

The rhetoric and the dream of objective and unbiased research on policy issues persists, partly because of the interests it serves. Policy makers use the notion of objective research as a mantle to cloak and legitimate their decisions. Researchers use their aura as experts to persuade politicians to come to them for advice. The idea of the university researcher as disinterested, politically neutral seeker of the truth has great appeal to the academy as well as to politicians. It places university researchers in the position of being the experts in areas of their research and of being untainted by the

self-interest and bias of those outside the academy. It places them in the best position to know the truth. It offers the politician a place to go for *unbiased* and knowledgeable answers.

Instead of clinging to these inadequate notions which misrepresent what we do to ourselves and to others, we must begin to develop alternative conceptions of how our research might be related to policy. The clear separation between research and politics is impossible to maintain. First, good research is not uninfluenced by political processes. The political location of so-called unbiased researchers has been clearly revealed in any number of political controversies. Developments in the philosophy of science have pointed to the inadequacy of the claim that facts can be separated from theories and values in any research endeavor. A new conception of social science must underpin our efforts to create a new version of how politics and research might come together.

Secondly, the old view of the separation of politics and knowledge is profoundly undemocratic in its implications. Putting such a high value on the knowledge of experts devalues the knowledge of ordinary people and the value of the political process in devising solutions to social problems. A new conception of the uses of research knowledge in the political process must be part of the reconsideration of the relationship between politics and research.

The Impact of Politics on Research

The impact of personal and social positions on educational research is increasingly recognized (Allender, 1986). As Lather (1986b) puts it, "just as there is no neutral education, there is no neutral research.... Research paradigms inherently reflect our beliefs about the world we live in and want to live in" (p. 257).

No research can address the entirety of any issue, much less a controversial and complex one, as any interesting policy issue is. No single viewpoint, however well informed, is adequate to the task of definitively characterizing social reality. Research questions are framed by our interests and experiences and are based in what Lindblom and Cohen (1979) call *ordinary knowledge*, that is, commonsense conceptions of the issue that are abroad in the society and the profession. Researchers look at the world through the spectacles of their conceptual frameworks which are expressed in language. Researchers must simplify and define a frame of reference and a series of questions in order to do their research. They must be clear on the purposes of their research. But in doing what we learn to do as competent researchers, we make choices that have consequences for what we will be able to conclude and how we will be able to participate in the political debate.

It is easy to see this in examples of educational policy research. The Coleman report on equal educational opportunity seemed like a definitive if controversial research study in 1968 (Coleman et al., 1966). But its use of regression analyses to relate student and school characteristics with achievement on standardized tests was based in the theoretical and methodological assumptions of its time. *Effective school* research followed the Coleman report discussion. It pointed out some of the theoretical and policy

pitfalls of using individual and family characteristics instead of school characteristics as independent variables. But it too can be seen as the product of a particular time and place (Cuban, 1984).¹

Research on the adequacy of private schools provides a good example of the interaction of research and politics. Coleman's recent study comparing private and public schools in the United States has been subject to a great deal of methodological critique that points to the interaction of methodological decisions and political conclusions (Hoffer, Greeley, & Coleman, 1985). Bergen's (1987) article on approaches to research and policy on private schools in Ontario and Alberta shows how government commissioned studies are shaped by their political roots.

Some less well known Canadian research done in British Columbia in the late 1970s provides another interesting example. The research was carried out just after the passage of the controversial Bill 33 which provided funds for independent schools. It was being partly funded by the Ministry of Education and directed by Erickson (1979), an American researcher who was known as an advocate of independent schools. The B.C. Teachers' Federation refused to cooperate. The controversy was reported at length in the newspapers.

Erickson's (1979) research was based on an argument that schools characterized by a sense of community, *Gemeinschaft*, as he called it, were more effective. He had called on a substantial body of literature to argue that in such schools students learned more, students felt better about themselves and their school, and teachers were more motivated and concerned about their students. *Gemeinschaft*, he argued, was necessary for a good learning environment. He went on to design a study that explored different dimensions of *Gemeinschaft* in the schools, and he compared public and private schools using these dimensions. He developed standardized scales designed to measure *Gemeinschaft*, and he found, not surprisingly, that private schools scored higher on the scales he used. He concluded, to oversimplify his argument, that private schools were better schools.

Erickson argued that his research was carefully done and that his involvement in the issue should be seen not as a liability that compromised his judgment, but as an asset that motivated him to do the research in the first place and helped him to clarify the questions. After all, he argued, if we could only do research on issues we did not care about, much of the interest of doing research would disappear. Moreover, scientific canons of inquiry would safeguard the study from bias. Rules about how to use evidence and the fact that the data were freely available for reanalysis ensured his neutral conduct of the research.

There were, of course, questions one could raise about the conduct of the research. Sampling problems, scales that were questionable, and conclusions that went beyond the data meant it was possible to pick methodological holes in the research, as it is possible to pick methodological holes in most research. But the more interesting issue was the way he framed the research in the first place and the kind of analysis that followed from this.

Erickson's questions had to do with creating a sense of community in schools because he valued a sense of community, and he had a hunch there was more of it in private schools than in public ones. He set out to show that what he had observed informally, what led him to prefer private schools, could be demonstrated formally by social science research. And sure enough, he found the differences he was looking for, on the average.

But think for a moment what a study would look like if opponents of private schools asked their questions, if they set out to show the strengths of public schools and the weaknesses of private ones. If they were worried about elitism, they would look at admission standards that discriminate against different kinds of students. If they were concerned about fundamentalist religious schools, they might take a look at the curriculum and see how democratic or close to scientific norms the curriculum in different schools was. If they were committed to the teachers' federation, they might look at the working conditions and salary levels of teachers and argue that the schools with the best conditions for teachers were the best schools. They might look at the accountability of the schools to the general public. They might look at how adequately schools cater to the needs of all students, not simply academic ones, by offering career education programs or programs for students with special needs. Research directed toward assumed weaknesses in the private school would gather different kinds of data, would test different models, would hold up different versions of the public interest, of good schools, of good education.

In short, Erickson poses his question, already thinking from common sense and a look at the literature that it is probably right, and then he engages in a selective search for facts that bear out his argument. This way of going about research is what we must do to develop research hypotheses and look for evidence. But it should be clear what is going on. Inevitably, the views of the researcher do affect the study. To try to do *value free* or *unbiased* research is simply to conceal, or try to conceal, the implicit point of view in the questions that are asked and the search for evidence. Researchers would do better to make clear why the problem is framed as it is, to justify the framework they are using, and to place it among competing concerns with the relevant issue.

When a particular study is located within the political debate, it becomes clearer that there is a range of other research studies that might be done on the same topic reflecting different political agendas. It makes clear that research on any politically controversial topic should be done from a variety of different political positions, not simply on one side of the argument. The limited sources of funding for research often make this difficult. Obviously, some sides of a political argument are going to be better funded than others. The B.C. government and the National Institute of Education provided Erickson with \$500,000 to do his study. It is unlikely that the B.C. Teachers' Federation and the B.C. School Trustees would come up with an equal amount of money. However, it is interesting that the Federation moved in the direction of using social science research to make their case when Bill 33 was announced. They commissioned a public opinion poll on selected

questions that they were interested in. They did not ask about *Gemeinschaft*. They did ask about whether schools should be accountable and should follow the core curriculum. They found that the public had attitudes which seemed to be antithetical to the private schools, and they communicated their research to the government in an attempt to influence policy. Here is an example of how research can be used on both sides of an issue as part of a public debate.

This controversy illustrates the political import of research questions and research design. How well the research is carried through is a critical issue and must be subject to public debate and scrutiny. But debate about the adequacy of the data collection must not substitute for debate about the adequacy of the assumptions in which the research is situated. It is these assumptions that must be made visible, debated, and formulated in different ways by different researchers. It is these assumptions that have political implications for what can be discovered and concluded and what can be introduced into the policy debate.

To clarify the different levels at which a piece of research can be judged is critical. Donmeyer (1985) argues that there are three such levels:

First order mistakes occur when the evidence cannot support propositions that have been framed by using a particular language.... Second order mistakes occur when the language used to frame propositions is not adequate for particular purposes ... third order mistakes relate to the inadequacy of the purposes themselves.

First order mistakes involve good use of evidence, and it is important that seeing the political character of research is not taken to mean shading the evidence to suit one's own presuppositions. The reason one frames the questions in a particular way and carries out the research is to find out as much as possible. Good policy research, like any research, must sift and weigh evidence carefully. As Lather (1986a) has argued, we must develop and refine techniques that ensure the credibility of our data and minimize the distorting effects of personal bias on the logic of evidence. It does not do anyone any good to get information that is not as carefully gathered and weighed as possible (p. 19).

Second order mistakes involve the usefulness of a conceptual framework for the political purposes they are being asked to advance. Here researchers must ask methodological and theoretical questions in light of their political purposes. For example, will interviews or questionnaires answer the questions better, how should questions be asked, should the unit of analysis be individuals or institutions, should students or teachers be questioned? The researcher must clarify how questions of individual agency and structure are being handled and what the methodology is going to illuminate and conceal. These decisions involve knowledge of competing frameworks and conceptual languages and an appreciation of their different implications. The question of what the research is trying to understand—what the political purposes are—should underlie these kinds of decisions.

Third order mistakes involve an analysis of the political purposes themselves. Doing politically located policy research does not mean that there can be no dialogue among different researchers about the adequacy of their

political frameworks and purposes. The relativist view that one person's politics is as good as another's and that differences among research frameworks are simply a matter of personal political preference trivialize the most important questions about our commitments as researchers and educators. To justify one's research choices is to engage in discourse about political questions, about the nature of good education in a good society. This dialogue is a critical one. It brings political discussion to the heart of the academic process.

Political self-consciousness means not just personal confessionals at the beginning of research reports but also a serious conceptual analysis of the frameworks that are being used and an argument for their utility. Politically situating the research in this way can help it have an impact, while at the same time it improves the conceptual logic and academic value of the study. Policy research becomes not a second-class research but research that does what all good research should do, and incidentally what the Social Sciences and Humanities Research Council demands applicants for research grants in all disciplines do, that is, justify their conceptual framework.

The Political Uses of Research

If research in education is to be increasingly directed toward policy controversies, it must become more conscious of its own uses in the political process. The lament of social scientists concerned with current questions of policy has been Why don't the politicians pay more attention to us? (Holdaway, 1986).² Why don't they commission more studies when they need answers? Why don't they heed the information that is available? Why do they simply use research when it legitimates decisions already taken?

In the traditional view of politics and research, the fact that policy makers do not use research is difficult to understand. The commonsense knowledge that politicians do bring to their decisions is seen as flawed and often inaccurate. Researchers see themselves as having superior knowledge. The scientist who is neutral, is outside politics, has no axe to grind, and can see with the sophisticated lenses of social science can clearly offer guidance—but his or her expertise is ignored.

Within the *first face* of policy research, the problem of the nonutilization of research findings can be treated as a technical one of bringing together researchers and policy makers. Some look at the lack of avenues of communication between the two communities. Policy makers do not read academic journals, and academics rarely use other media for communicating their ideas. The differences in time frame between academic researchers and policy makers is also recognized as a problem. If a researcher takes two years to do the research, and the policy decision must be taken in two weeks, no wonder the academic research is not used.

The problem can also be traced to the motivations of policy makers. The costs of the social scientist's good recommendations may be too high in terms of dollars or political support. The concerns of policy makers may be not the public welfare, but their own political longevity. "The policy-making value of any study depends on whether its recommendations can be imple-

mented while at the same time enhancing the political strength and social status of the government" (Bergen, 1987, p. 304).

But once the political assumptions built into the research are recognized for what they are, other explanations for why research is not used by policy makers become apparent. The problem is not simply a technical one of making the research known and available to those who should use it. The problem is the congruence between the political frameworks of the researcher and the political actor. If the political framework of the researcher does not fit with that of the politician, it is unlikely that the research will be perceived as useful. If the research does not address the concerns of someone who is involved in the determination of policy, it will not be relevant to the debate around the policy. To be useful, policy researchers must not only abandon their quest for political neutrality but must also take into account explicitly which audiences might use research in a political arena. To have their research used, researchers need to recognize that policy making is properly a political process and to locate themselves within this political discourse rather than outside it.

This argument has tended to produce a rather conservative face for policy research. Policy research, it is argued, must take into account the way the government sees things. Policy researchers must learn to frame their research from the point of view of those who will make the decisions. May (1986) urges more attention to the political feasibility of policy options. Bergen (1987) writes that "The policy making usefulness of a study is contingent on the degree to which its recommendations reflect the reality of economic, social and political forces which sway the decisions of governments" (p. 304).

Coleman and Laroque (1983), recognizing the necessity for taking into account the actual political process in the design of policy research, argue that researchers need to pay more attention to what politicians want from researchers when they design their research. They suggest policy research should

investigate problems which are of concern to them, and should be designed to provide data and interpretations which have predictive validity concerning the probable consequences of policy options.... [It] should concern itself with those policy options which are important to policy makers [by] providing relevant and reliable predictive generalizations. (p. 247)

In this mode, the researcher remains a technical expert in the service of the administration by adopting the current discourse and a scientific mantle and by finding technical answers. Administrators are assumed to be benevolent, interested in the welfare of all, and open to advice from researchers. The role of the researcher is restricted to providing answers to administrator's questions. To tailor research to their needs is to serve the collectivity.

Self-consciously building the assumptions of the administrator into the formulation of the research problem recognizes that research must have an audience and recommends adopting a framework that takes politics into account in order to reach the intended audience. But the particular political

assumptions that are suggested are just what scare so many away from a policy framework and result in the accusation that policy research sells out to the highest bidder. If policy research involves serving those with power and identifying politicians and administrators as benevolent and powerful, critical research is imperiled. The options considered by administrators will fall within a narrow range, and too many limitations will be placed on the discussion of issues. If policy research means limiting oneself to considering viable options for those with power, what happens to challenges to the existing political order, to the lively debate that has characterized conceptually innovative research? Policy research that accepts these limitations reinforces the structure and ideology of the existing world.

It is important to broaden our ideas of the audience for policy research beyond administrators in schools and politicians who want to retain office. We need a new version of the political process to work with, one that encourages democratic decision making instead of administrative fiat, one that understands the complexity of arriving at policy outcomes instead of positing a rationalist process.

If policy research is conceived of as addressing a democratic polity with conflicting interest groups and shifting agendas instead of addressing the benevolent administrator with a defined problem, much broader uses for research in the political process open up. Researchers can explore issues from many potentially conflicting points of view including that of the student, the parent, the teachers' federation, or the government agency, to mention only a few. It can clarify, legitimate, and expand the political agendas these groups start with instead of simply solving problems for them. The researcher can work in dialogue with the groups whose concerns he or she is addressing. What matters is that the research is located, contextualized, and addressed to a specific audience.

Research can serve to highlight new questions and problems, to help frame the political discussion, as well as to solve problems. As Worth (1978) puts it,

We must start with the recognition that the problem-solving image of policy formation is probably a myth.... The functions of policy research ought to include the identification of problems as well as the analysis of possible solutions and the evaluation of outcomes. (p. 5)

Weiss (1977, 1983) has stressed what she calls the *enlightenment* functions of research:

Not single findings, one by one, but ideas from social science research appear to affect the development of the policy agenda. Social science research is one of the sources from which participants in the policy process derive their sense of how the world works. (1983, p. 219)

Research in education can articulate educational problems in ways that are official and public. Research on drop-out rates, literacy levels among Native people, or the effects of streaming on high school graduation can be a political statement on behalf of groups who have been excluded. Torgeson (1986) uses the Berger Inquiry as an example of policy research that manages to give a voice to those who would not normally be heard. The

government funded a wide variety of groups to do research and put together briefs that could then be considered in the inquiry about the Mackenzie Valley Pipeline.

The Inquiry solicited and received scholarly reports on various dimensions of the pipeline issue. The research, however, was not simply accepted at face value. Impact statements countered one another; study challenged study. With replies, rebuttals, cross examinations, debate moved at a high level of sophistication. (Torgeson, 1986, p. 47)

Educational policy makers and educational researchers can learn from this example. Instead of calling for definitive studies of educational problems, we need to encourage diverse constituencies to take the research enterprise seriously. In the process, the public can come to see the value of the research enterprise, and our research can be informed by their understandings.

If an issue is important enough to research, it is important enough to introduce into the political process. Researchers need to see themselves as advocates of their research and their findings. They can be advocates for children, for equity, or for teachers if their research is framed in ways that allow it. Researchers need to follow through on the political commitments they make in their work. The simple separation of politics and research is no longer an adequate conception of how we work, especially in professional faculties committed to the improvement of practice.

The debates around Erickson's research on private schools, which I discussed earlier in this paper, provide a concrete example of the mismatch between research and political agendas. Erickson's concerns for the effectiveness and sense of community in private schools were far from the concerns of policy makers at the time (Downey, 1979). Some of the issues that did matter were issues of principle—the *right to choose*; some were issues of self interest—the power of organized religion. The question of where votes would be won or lost mattered a great deal to the government. While Erickson's research dealt with an important educational issue, with the quality of schooling, with, at least by inference, effects on children, the policy debate did not appear to be much influenced by these issues. This is too bad. One role of a controversial study is to highlight issues of concern to children and introduce them into the debate.

But introducing a new issue is difficult unless there is a political constituency that will take it up. If the assumptions of the researcher are shared by some political actors, the research is more likely to be taken up and used. In most policy debates, perceptions and vested interests are strongly held. Locating one's work within the existing debate, even if it ultimately goes beyond this debate, is often a good idea.

Erikson's (1979) work did not change many minds about whether private schools are good schools, bad schools, or, as is more likely, a mixed bag. People's commonsense understanding of the world is powerful, and they are reluctant to give it up in the face of *scientific* evidence often gained from a questionnaire on an odd sample of schools. There are many examples of this phenomenon in education. Perhaps the best known is the

issue of class size. Research shows that students do not learn any more in small classes than they do in larger classes, other things being equal. However, teachers are convinced that students do learn more in smaller classes, and research evidence will not convince one side or the other, because each operates with different ideas of what counts as good schooling.

Consideration of the existing debates is likely to inform the political decisions I have argued every researcher must make. My own research has made this clear for me. In examining questions of equality for women, the positions of liberal feminists, socialist feminists, and radical feminists all need to be considered in deciding how to frame questions of equity (Gaskell & McLaren, 1987). If equality of access to existing programs is the issue, one looks at barriers to entry for women in nontraditional programs. If equal pay for work of equal value is the issue, one looks at how the value of women's traditional work is defined. How to frame important research questions grows out of a consideration of important political issues.

Where does this leave the researcher in relation to the political process? Not in the position of philosopher queen or king, sitting in the best position to decide on policy outcomes but rather in the position of a well-informed political actor engaging in a democratic political process where argument, evidence, and political power matter. What research can do is test out particular views, modify and adjust them a bit in light of the real world, and articulate them more clearly, more forcefully, more consistently. It can also, in the long run I think, improve the nature of the debate by adding information and clarity to the issue.

Conclusion

I have argued that research is an inherently political process reflecting the values, the concerns, the commonsense—socially and historically located—assumptions of the researcher. To recognize that research is involved in political choices is not to argue for any particular theoretical or methodological position. It is certainly not to disrespect the particular expertise that is necessary for good research. It is, however, to suggest that policy researchers should see themselves as political actors and work to have their research reflected in political debates. It is not to argue that research should serve those in powerful positions, but it does mean that research should seek out an audience and be located in terms of the concerns of this audience.

This involves both humility and daring on the part of the researcher—humility in recognizing that the way we frame problems may not be the way others, including policy makers, do. We have no exclusive claim on right answers because we have done research. Others have every right to frame questions their way, and we can often learn if we listen to them. As researchers, we do not have the institutional responsibility or the knowledge necessary for making policy decisions. But recognizing the political nature of research also involves daring. Researchers cannot hide behind their technical role, arguing that all the political choices are made elsewhere. In recognizing the way carrying out research involves political decisions, re-

searchers must be prepared to defend their political positions and to take this defense forward into the political arena where decisions are made.

Politicization, then, is not a problem. Good policy research should be firmly situated in the literature, in policy discussion, in relation to the researcher's purposes and audience. Rather than claiming neutrality, every project should expose the commonsense underpinnings that situate it in a political discourse. Each part of that discourse has a place for good research.

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Notes

1. See Wexler's work (1976, 1987) on the sociology of education for a detailed analysis of the social and political conditions that affected its direction and content.
2. Worth (1986) sounds a more skeptical note when he writes that educational research is such a poor guide to action in the classroom or the boardroom that we ought to feel relief, rather than regret, that it is so seldom used. Otherwise, researchers might be the scapegoats of our educational system and educational research might enjoy even less support than it does now. (p. 175)
See Chester Finn (1988) on the same point.

References

- Allender, J.S. (1986). Educational research: A personal and social process. *Review of Educational Research*, 56(2), 173-193.
- Bergen, J.J. (1987). Government sponsored private school studies in Alberta and Ontario. *Alberta Journal of Educational Research*, 33(4), 292-306.
- Callahan, D., & Jennings, B. (1983). *Ethics, the social sciences, and policy analysis*. New York: Plenum Press.
- Carr, W., & Kemmis, S. (1986). *Becoming critical: Education, knowledge and action research*. London: Falmer Press.
- Coleman, J., Campbell, E.Q., Hobson, C.J., McPartland, J., Mood, A.M., Weinfeld, F.D., & York, R.L. (1966). *Equality of educational opportunity*. Washington, DC: US Government Printing Office.
- Coleman, P., & Laroque, L. (1983). Linking educational research and educational policy via policy-relevant research. *Alberta Journal of Educational Research*, 29(3), 242-255.
- Cuban, L. (1984). Transforming the frog into a prince: Effective schools research, policy and practice at the school level. *Harvard Educational Review*, 54(2), 129-151.
- Donmeyer, R. (1985). The rescue from relativism: Two failed attempts and an alternative strategy. *Educational Researcher*, 14(10), 13-20.
- Downey, L. (1979). *The anatomy of a policy decision*. Vancouver: University of British Columbia, Faculty of Education.
- Erickson, D. (1979). *The funding of independent schools*. Research report submitted to the Ministry of Education, Victoria, BC.
- Finn, C.E. (1988). What ails education research. *Educational Researcher*, 17(1), 5-8.
- Gaskell, J., & McLaren, A. (1987). *Women and education: Canadian perspectives*. Calgary: Detselig.
- Gerth, H.H., & Mills, C.W. (1958). *From Max Weber: Essays on sociology*. New York: Oxford University Press.
- Hoffer, T., Greeley, A., & Coleman, J.S. (1985). Achievement growth in public and Catholic schools. *Sociology of Education*, 58(2), 74-97.
- Holdaway, E.A. (1986). Making research matter. *Alberta Journal of Educational Research*, 32(3), 249-264.
- Kuhn, T. (1970). *The structure of scientific revolutions* (2nd ed.). Chicago: University of Chicago.

- Lather, P. (1986a). Issues of validity in openly ideological research: Between a rock and a soft place. *Interchange*, 17(4), 63-84.
- Lather, P. (1986b). Research as praxis. *Harvard Educational Review*, 56(3), 257-277.
- Lindblom, C., & Cohen, D. (1979). *Usable knowledge: Social science and social problem solving*. New Haven: Yale University Press.
- May, P.J. (1986). Politics and policy analysis. *Political Science Quarterly*, 101(1), 109-125.
- Newson, J., & Buchbinder, H. (1988). *The university means business*. Toronto: Garamond Press.
- Postlethwaite, N. (1986). Policy-oriented research in education. *Oxford Review of Education*, 12(2), 135-151.
- Torgeson, D. (1986). Between knowledge and politics: Three faces of policy analysis. *Policy Sciences*, 19, 33-59.
- Weiss, C. (1977). *Using social research in public policy making*. Lexington, MA: Heath.
- Weiss, C. (1983). Ideology, interests and information: The basis of policy positions. In D. Callahan & B. Jennings (Eds.), *Ethics, the social sciences and policy analysis* (pp. 213-248). New York: Plenum.
- Wexler, P. (1976). *The sociology of education: Beyond equality*. Indianapolis: Bobbs Merrill.
- Wexler, P. (1987). *Social analysis of education: After the new sociology*. London: Routledge & Kegan Paul.
- Worth, W.H. (1978). Perspectives on policy formation. *Canadian Journal of Higher Education*, 8(2), 1-7.
- Worth, W.H. (1986). Research impotence: Blessing or blight? *Alberta Journal of Educational Research*, 32, 175.

BOOK REVIEW

INTRODUCTION TO THE ECONOMICS OF CANADIAN EDUCATION.

By Donald M. Richards and Eugene W. Ratsoy. Calgary, AB: Detselig Enterprises, 1987, 127pp.

This volume is a welcome addition to the writings on educational economics and finance in Canada. It is designed to provide a basic perspective on economics to university students and policy makers. I was pleased to receive a draft copy and offer a suggestion several months ago. Consequently, this review provides an opportunity to see if the authors acted on my advice. Let me take a walk through the book and then present some general reactions.

Chapters 1 and 2 cover basic concepts from economics which the authors believe useful for those whose background in the subject is scant. I would concur that this is a good idea because most prospective readers are unlikely to be acquainted with the nomenclature. Chapter 1 is presented in the raw, however. While clearly laid out in simply-stated language, it could have been made less dry with the use of examples from education. References to commodities are fine, but educators are in the service business. The next chapter, a well-stated account of wealth and economic activity, is accurate to the modest knowledge of this reviewer. There is also more information on Canada here, although more stress on business cycle indicators such as the consumer price indexes and interest rates might have been helpful. Chapter 3 extends the discussion to national economic policy and is mostly devoted to the Economic Council of Canada's annual reviews from 1964 to 1971. A useful summary section provides five main goals for the Canadian economy. One wonders why the descriptions are restricted to those eight reports, particularly as the emphasis on government intervention has been reduced so much since that era.

The next three chapters focus on investment in education. Chapter 4 presents the main concepts such as consumption, spillovers, and public versus private goods. However, no sources for the ideas are given so that a reader is given no leads to pursue other references. A section on techniques in working with compound interest lays out the formulas, but except for one example not applied to education, it leaves the reader to generalize on his or her own. Chapter 5 brings a number of welcome Canadian studies showing returns on investment in education, all but two being at the postsecondary level. They could serve as fine building blocks for future research. Just why the selected studies were all completed during 1965-70 (except for one in 1980) is not clear. It might have been useful to know about educational returns on investment during the last two decades, particularly because wage rates for unionized labor may have boosted lifetime earnings for some with fewer years of education. Chapter 6 grapples with some of the different approaches used with human capital studies. However, the writing is strict-

ly authoritative, except for references to Dennison. No other connection is made to the literature.

The next three chapters address costs, revenues, and governance. Chapter 7 illustrates the dramatic increase in the costs of education well. It presents approaches to the studies on costs and connects them with Canadian sources. The thorny problems of revenue generation are tackled in Chapter 8. Again, one wonders where certain principles such as those of taxation (p. 92) come from. However, the main ideas are clearly stated with balanced coverage. Chapter 9 hits a number of economic policy issues facing educators. These are so important that I would have preferred more stress on them.

The last quarter of the book is devoted to the smaller-scale issues surrounding the production of educational services. Chapter 10 describes the various factors, processes, and outputs which characterize the general production model. The next chapter then looks at different ways in which the model may be conceived and applied —perhaps the best chapter in the book. It includes work on effective schools which demonstrates the willingness of the authors to conceive of the economics of education rather broadly. The final chapter takes a look at production function studies (broadly defined) and offers some of the standard criticisms of them.

Here are three general reactions. One is the need for more clearly documented sources, particularly for students. While policy makers may not need to know where ideas come from, a book used as a text for courses in educational economics and finance requires that ideas be connected to prior works. (For those interested, this was the recommendation transmitted earlier.) Another problem is the generally descriptive nature of the volume. While some descriptive material is necessary, I think it would have been useful for the authors to have provided many more comparisons and contrasts of the ideas as they were presented. While the onus is always on the reader to make the connections and add the criticisms, this reviewer believes that for both students and policy makers, the volume would have been strengthened with a greater amount of analysis than it now contains. A third general reaction is that I would like to have seen a thirteenth chapter which spelled out some of the exciting policy choices derived from the earlier chapters. Such a chapter would have demonstrated the power of the ideas more completely. While many of these issues are addressed in passing, a book like this could have provided a sense of potential Canadian policy directions for the next decade.

It would be easy to dismiss the economics of education. The concepts are so compelling, but the data are so damnable. Yet the ideas and facts brought forward in this book are valuable ones. Richards and Ratsoy have given us a highly readable handbook of interest to those who have a concern for educational policy, particularly at the provincial and local levels. What is its use as a text? It should serve well as a supplementary volume, though instructors will probably prefer to remain with old standbys such as Benson or Cohn for their greater breadth and depth.

What is the bottom line? Richards and Ratsoy are to be commended for their willingness to produce this volume which integrates the *econ. of ed.* into the Canadian context. This work has obvious utility for students and policy makers because it makes the right assumptions about the level of knowledge and issues of key interest.

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